

TTN TMS

TTN Translation Management System

Computer-Assisted Translation and
terminology (CATT) tool



Information Security



Translation Services



Quality Management



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1 TTN TMS Comprehensive Feature Set

1.1 Ordering & Client Interface

- ✓ Self-service client portal with intuitive 3-click order submission.
- ✓ 500+ specialized order forms to handle complex or custom project requirements.
- ✓ Multiple workflow options (e.g. translation-only, translation+review) with configurable pricing models.
- ✓ Automated deadline suggestions and validation based on real-time translator availability.
- ✓ Client access to full translation archives for on-demand download of past projects.
- ✓ Client visibility into translator & proofreader profiles for transparent team selection.
- ✓ Built-in client feedback and rating system directly influencing translator assignment.
- ✓ Multilingual client interface available in 60+ languages for global user adoption.

1.2 Translation Workflow & Automation

- ✓ End-to-end project completion in just 9 clicks from order to final delivery.
- ✓ Automatic translator & proofreader assignment (Autopilot) with priority teams and fallback to backups.
- ✓ Hands-free job forwarding through all workflow steps, including automatic client delivery upon completion.
- ✓ Integrated email services for automated project intake and status notifications at each stage.
- ✓ Continuous workflow monitoring with proactive alerts (SMS/WhatsApp notifications for errors or missed deadlines).
- ✓ Web-based translation editor and Trados Studio integration (GroupShare) for flexible translator workflows.
- ✓ Broad file format support with automated file processing (58 formats, incl. Office and PDF OCR/alignment).

1.3 AI & Machine Translation

- ✓ Parallel use of multiple MT engines with automated quality metrics (BLEU, edit distance, etc.) to benchmark outputs.
- ✓ Translation memory and glossary integration into machine translation for context-enhanced AI output quality.
- ✓ AI-driven quality assurance checks (automated content review that flags errors and inconsistencies pre-delivery).
- ✓ Automated terminology extraction and glossary synchronization to improve machine translation consistency.

1.4 Terminology & TM Management

- ✓ Central server-based translation memory for real-time collaboration, scaling to millions of translation units.
- ✓ Linguistically advanced search in TMs and termbases (fuzzy matching, concordance, morphological and compound search).
- ✓ Integrated terminology management (MultiTerm) with customizable fields and rich entries (definitions, context, images).
- ✓ Automatic term recognition and highlighting in the CAT editor with one-click access to term details.
- ✓ Auto-provisioning of translation memories and termbases for new language pairs using templates (no manual setup).
- ✓ Complete TM/TB administration control (custom fields, import/export, and granular user access permissions).

1.5 Vendor & Resource Management

- ✓ Comprehensive translator database with detailed profiles and skill tags for optimal resource matching.
- ✓ Dedicated client-specific translator teams with priority tiers to ensure consistency (backup linguists pre-assigned).
- ✓ Dynamic workload tracking in 15-minute increments with alerts if a linguist exceeds capacity.
- ✓ Integrated availability management (translators log absences, and scheduling avoids assignments during unavailable periods).
- ✓ Resource planning calendar for on-call rotations, with automated WhatsApp/SMS shift reminders to translators.
- ✓ Flexible translator compensation models (per-word or per-line rates, source vs target text, time-based billing, etc.).
- ✓ Automated monthly vendor invoicing via credit notes with detailed order breakdowns and accounting system integration.
- ✓ Vendor performance reporting and analytics (annual earnings per linguist, client turnover, and other KPIs).

1.6 Analytics & Reporting

- ✓ Live dashboards with translation statistics by language, project volume, turnaround time, and other KPIs.
- ✓ Complex cost analysis tools to evaluate team efficiency and departmental performance.
- ✓ Real-time project pipeline visibility and status tracking for translation managers.
- ✓ Detailed quality and revision metrics (e.g. human edits vs. MT output, AI-flagged errors) for continuous improvement.

1.7 Security & Infrastructure

- ✓ Flexible deployment on-premises or hybrid cloud to meet data sovereignty and compliance requirements.
- ✓ Fully certified to ISO 17100 (Translation Services), ISO 9001 (Quality Management) and ISO/IEC 27001 (Information Security).
- ✓ High-availability design with full system mirroring and failover for true 24/7 uptime.
- ✓ Multi-layer data backups with frequent replication and offline storage, preventing data loss from malware.
- ✓ Active system health monitoring with automatic failure detection and instant SMS alerts to admins.
- ✓ Enterprise scalability to handle multi-gigabyte files, large translation memories, and hundreds of concurrent users.

1.8 TTN TMS vs. Top TMS Competitors – Feature Comparison Matrix

TTN TMS offers several unique features and is best in class across many key areas.

Legend: ✓✓✓ = Best in class; ✓✓ = Solid implementation; ✓ = Basic/limited; X = Not available.

Advanced Feature	TTN TMS	RWS Trados	XTM Cloud	Phrase	Smartling	TransPerfect GlobalLink	Global-Sight
Term extraction & MT glossary sync	✓✓✓	✓	✓✓✓	✓	✓	✓	✓
AI-driven “Autopilot” assignment	✓✓✓	✓✓	✓✓✓	✓✓	✓✓✓	✓✓	✓
AI-powered quality evaluation	✓✓✓	✓	✓✓✓	✓✓✓	✓✓✓	✓	✓
AI-based email parsing (Mail Robot)	✓✓✓	X	X	X	X	X	X
Translator feedback loop (auto TM updates)	✓✓✓	✓	✓	✓	✓	✓	✓
“Nine-click” end-to-end workflow	✓✓✓	✓	✓✓	✓✓	✓✓	✓	✓
Trados Studio/GroupShare integration	✓✓✓	✓✓✓	✓	✓	✓	✓	✓
“Web-to-TM” (bilingual web alignment)	✓✓✓	X	X	X	X	X	X
On-premise & hybrid deployment	✓✓✓	✓✓✓	✓✓✓	X	X	✓✓✓	✓✓✓
Real-time archive access	✓✓✓	✓	✓	✓	✓	✓	✓
Translator performance tracking & balancing	✓✓✓	✓	✓	✓	✓✓	✓	✓
Public Translator Database	✓✓✓	X	X	X	X	X	X
Automated NDA management	✓✓✓	X	X	X	X	X	X
Data exfiltration protection	✓✓✓	X	X	X	X	X	X
Geo-blocking & VPN/proxy detection	✓✓✓	X	X	X	X	X	X
Audit trail & user activity logging	✓✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓

2 Overview of the TTN Translation Management System

Historical Background and Early Innovations

In 1988, TTN launched what was likely the world's first translation server. Written in assembler and C, it operated via a 1200-baud Hayes modem on a machine with only 640 KB of memory. In the early 1990s, this innovation won several prestigious software awards. One of the first clients to use the system was the SLF Institute for Snow and Avalanche Research in Davos. The system could relay translation orders fully automatically at any time of day, making it particularly valuable for clients requiring rapid turnaround times.

Evolution into an AI-Driven TMS

Over the past four decades, TTN has continuously developed this technology into a powerful and comprehensive Translation Management System (TMS). The system's unique selling point is its fully automated, AI-driven operation, which performs many project management tasks more efficiently than a human manager. The TTN TMS offers numerous features that are not currently available in any other system.

Secure On-Premises Infrastructure

The current version of the TTN TMS system is deployed on-premises in a high-security data centre in Geneva. It can also operate as a hybrid system, hosted partly on Microsoft Azure Cloud Services. This configuration was selected because many of TTN's medical and military clients require that data not be stored on U.S.-controlled cloud infrastructure.

Company Structure and AI Expertise

The TTN TMS software was developed by Extran Ltd., a Geneva-based company. Since 2006, Extran has also owned an AI-focused subsidiary, Keybot LLC, which developed a proprietary system for converting multilingual websites into translation memories.

Features and System Capabilities

TTN's AI-powered TSM uses a CATT container approach to integrate multiple third-party translation tools rather than relying on a single proprietary system. It seamlessly incorporates RWS GroupShare—one of the highest-performing translation memory (TM) systems—and supports both an online editor and Trados Studio. This solution ensures robust performance with translation memories containing millions of segments, where many other systems struggle.

Workflow Automation and Efficiency

The system is designed so that producing a translation requires only nine clicks from start to finish. The process has been designed to be highly efficient and user-friendly:

- 3 clicks by the client to create and submit the order.
- 3 clicks by the translator to accept, translate, and deliver the file.
- 3 clicks by the proofreader to review and finalise the translation.

This streamlined workflow minimises administrative effort and ensures that projects progress seamlessly from request to delivery in a very short time, with direct intervention by the Translation Manager rarely required.

If an issue or exceptional task arises, the system immediately notifies the Translation Manager via WhatsApp, SMS, or email. Minor issues can be resolved promptly and efficiently – even from a smartphone – ensuring uninterrupted operation and continuous project flow.

Approximately 98% of routine tasks can be handled through a few simple web forms. However, TTN's TMS also provides over 500 specialised forms to manage complex cases or special requirements. These advanced forms allow expert users to handle edge cases and require more in-depth training.

Language Support and User Interface

The TTN system supports translations into over 150 languages. The client-facing user interface is available in 63 languages, ensuring accessibility for clients worldwide.

Integration with GroupShare and AI Tools

TTN has developed its own translation search engine called Keybot as part of its AI initiatives. The company's AI team (Keybot LLC) has also created a custom plugin for SDL Trados that leverages conversational AI to maximize translation quality and consistency.

3 System Architecture and User Roles

3.1 TTN TMS Terminology

TTN TMS has four Interfaces for four different user types:

Name	Description
Client	Clients can order translations through an intuitive ordering interface that immediately calculates up to seven possible delivery deadlines based on text volume and real-time translator availability. Authorized users can access their private or company-wide archives, online termbases, translation memories, and full-text archives.
Translator	Under "Translator," we also include proofreaders. Translators and proofreaders receive translation or proofreading assignments and execute them within the TTN TMS environment. The translator interface allows users to download and upload translation jobs and provides access to translation resources such as translation memories (TMs), termbases, full-text archives, client forums, and user manuals.
Translation Manager	The Translation Manager supervises the workflow and parameterizes the translation flow settings for the clients.
System Operator	The system operator has access to advanced system setup functions. They can test functionalities and have access to the operating systems. The system operations tools are intended for TTN-TMS staff and are not explained in this presentation.

3.2 System Components

TTN TMS runs under Windows Server environments and includes the following applications:

Component	Type	Description
TTN TMS	IIS Application	Main aspx application written in C# with over 600 forms.
GroupShare	IIS Application	Third Party IIS application from RWS Trados
TTN SDL	TCP/IP Server	TCP/IP Server to handle interaction between TTN TMS and GroupShare
TTN Counter	TCP/IP Server	TCP/IP Server to handle interaction with Office and other files
TTN Converter	CMD Application	Convert files to HTM, PDF, WORD
TTN WorkLoop	Windows Application	Automatic workflow handler
TTN Replicator	Windows Application	Backup on Offline Server
Web to TM	Set of 15 Applications	Converts Websites or File Repositories into TMs with a powerful alignment tool

4 Client Interface

4.1 Order System

Clients can either create an account themselves or receive their login credentials automatically during a batch migration.

TTN supports a 3-click order system: Select language → Drop files → Select a suitable deadline.

When the client wants to order a translation, they are asked to select the target language.

Select target languages for translation!

<input type="checkbox"/> Czech	<input type="checkbox"/> French	<input type="checkbox"/> Portuguese
<input type="checkbox"/> Danish	<input type="checkbox"/> German CH	<input type="checkbox"/> Slovak
<input type="checkbox"/> Dutch	<input type="checkbox"/> German GFR	<input type="checkbox"/> Slovenian
<input type="checkbox"/> English GB	<input type="checkbox"/> Greek	<input type="checkbox"/> Spanish
<input type="checkbox"/> English US	<input type="checkbox"/> Hungarian	<input type="checkbox"/> Swedish
<input type="checkbox"/> Estonian	<input type="checkbox"/> Italian	+ Show all languages
<input type="checkbox"/> Finnish	<input type="checkbox"/> Polish	

Select one or more files to be uploaded.

[Select your files](#) or [Paste Text](#) [Cancel](#)

Figure 1: Selection of target languages

The list shows a set of predefined languages. If needed, users can choose from up to 150 languages. The initial suggestions are generated dynamically from recent usage statistics to streamline and speed up the ordering process.

The screenshot displays the TTN translation network interface. On the left, there is a sidebar with the 'Order' section, a hand icon, and 'Translation mode' options: 'Classical translation' (Translator and proofreader), 'Full Post-Editing' (AI with language comparison), 'Light Post-Editing' (AI with proofreading), and 'Automatic Translation' (With client TM & TermBase). The main area is titled 'Please select a suitable price and deadline. Classical translation'. It shows order details: Order Name: Test Order German, Order Number: 75 224, Invoiced words: 365, Source Language: German. Below this are links for 'Add:' such as 'Instructions', 'CC Mail', 'Invoice Code', and 'Upload Documentation Files'. A 'File List' section shows 'Test Order German.docx' and 'Target Languages' (French, Spanish). The 'Select the deadline' section features a table with columns: Day, Date, CET, CHF before VAT, and Express. The table lists various dates from 04 November 2025 to 06 November 2025 with corresponding times and costs. At the bottom, there is a 'Select your own deadline' section with a 'Select' dropdown and 'Help', 'Cancel', and 'OK' buttons.

Day	Date	CET	CHF before VAT	Express
<input type="radio"/> Tuesday	04 November 2025	11:45	446.40	60%
<input type="radio"/> Tuesday	04 November 2025	14:15	390.60	40%
<input type="radio"/> Tuesday	04 November 2025	16:45	334.80	20%
<input checked="" type="radio"/> Wednesday	05 November 2025	12:00	279.00	
<input type="radio"/> Wednesday	05 November 2025	14:30	279.00	
<input type="radio"/> Wednesday	05 November 2025	17:00	279.00	
<input type="radio"/> Thursday	06 November 2025	10:30	279.00	

Figure 2: Translation mode and deadline selection

After an upload is completed, the system immediately proposes seven possible deadlines and displays them as selectable options. Experience shows that 90% of users accept one of the proposed deadlines and simply click “OK.” In addition to these seven suggestions, users may also choose a custom deadline from the pickup schedule. If a user selects a deadline that is not feasible, the system displays an appropriate warning.

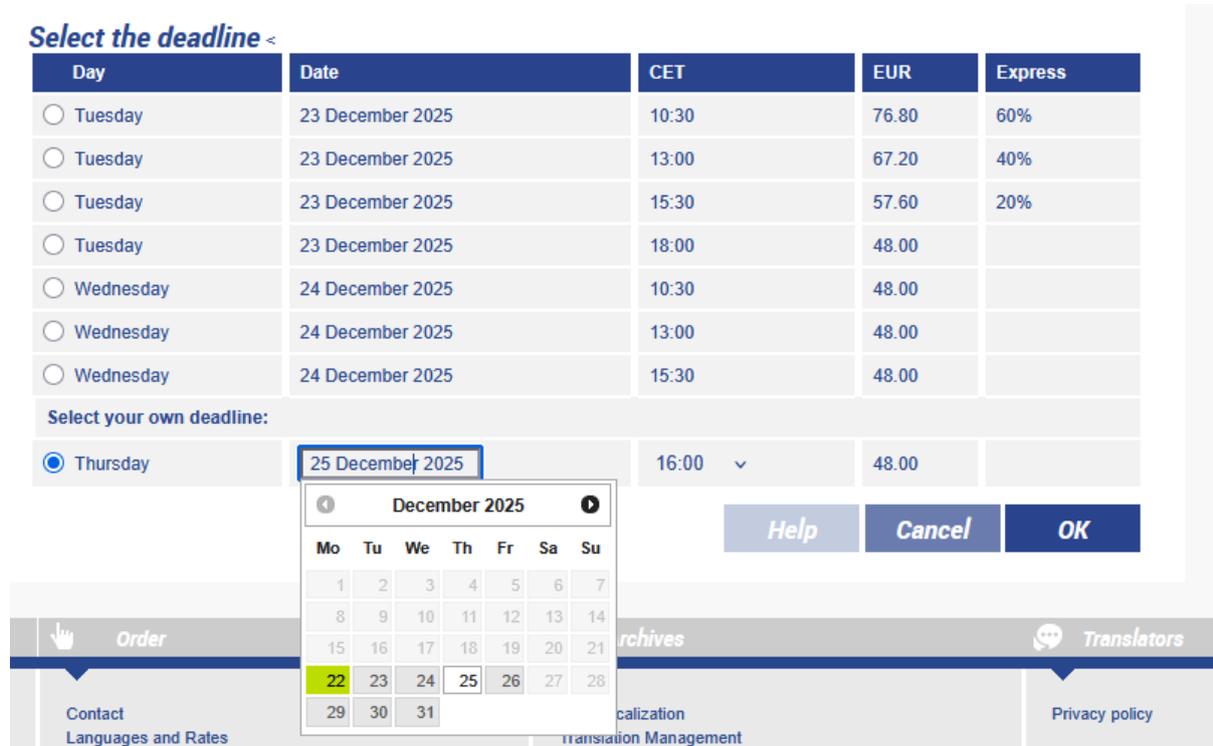


Figure 3: The client can select his own deadline

The order screen is entirely parameterizable. Prices can be replaced by points, the express charge can be suppressed, and the translation modes can be reduced or expanded. The parameterization takes place through the registry or the system operator interface.

YN_Allow_MT	REG_SZ	Yes
YN_Allow_MT_Full	REG_SZ	Yes
YN_Allow_MT_Light	REG_SZ	Yes

Figure 4: Parameterisation through registry or System Operator Interface

The deadlines are calculated according to the availability of the translation resources. They can be parameterized for each user or user group individually.

4.2 Translation Mode and Workflows Schemas

The translation mode corresponds to different workflows with distinct pricing or effort models. In this example, four workflow options are presented. TTN-TSM is a modular system, allowing each workflow to be easily configured according to specific requirements.

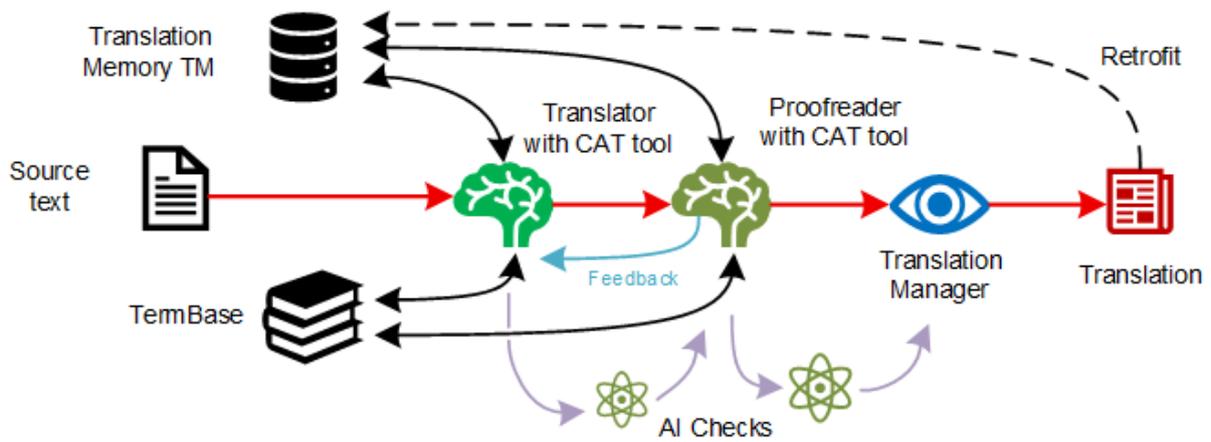


Figure 5: Classic translation

In the classic translation model, the text is translated by a human translator and then carefully corrected by a proofreader. The Translation Manager supervises the process, especially if there are several target languages, ensuring consistent formatting across all languages. They review the source files for any images. If necessary, they organize vector files so that they can be overwritten, or they place text boxes covering the pixel legend so that the translators can access them in segmented mode of the XLIFF editor.

Once the translators have uploaded their work, the files are automatically routed to the proofreader. The system generates advanced AI analyses and a comprehensive CATT Quality Assurance report, which are provided to support the proofreading process. After the proofreader submits the revised version, the content is sent to the latest version of ChatGPT for a final, in-depth quality assessment—ensuring maximum linguistic accuracy and consistency before delivery.

If the client changes the text after the translation, they can upload it or send it by mail. The file will then be retrofitted, and the latest modifications will be updated in the Translation Memory.

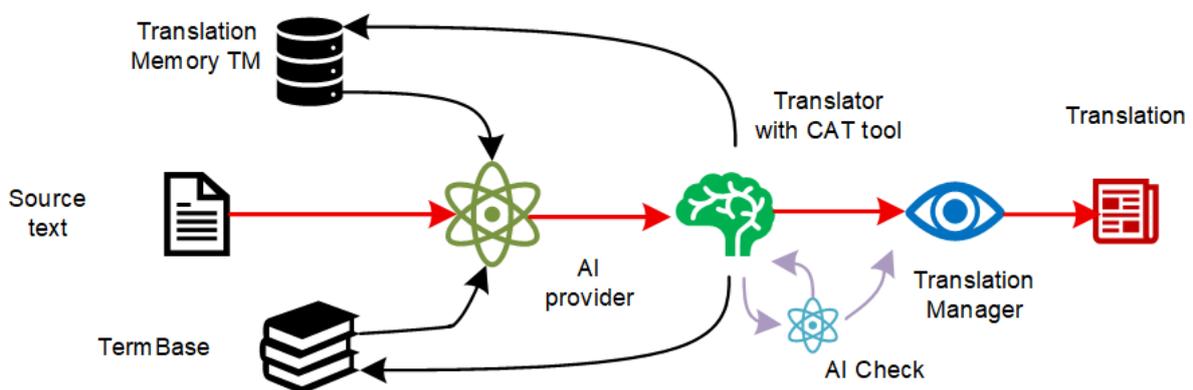


Figure 6: Full Post-Editing

In the full post-editing model, the text is first translated by an AI Provider. The exact procedure is explained later. The text is then carefully compared with the source text. If the system detects any pictures, references, or other unhandled elements, the Translation Manager will check the files and adapt them accordingly before sending the file to the client. The Translation

Manager also verifies that the translator can access the relevant resources from the Translation Memory and TermBase, ensuring that the linguistic work is carried out with the correct reference data. They coordinate the workflow so that the translator can perform the detailed comparison between source text, AI output, and the linguistic resources used during post-editing.

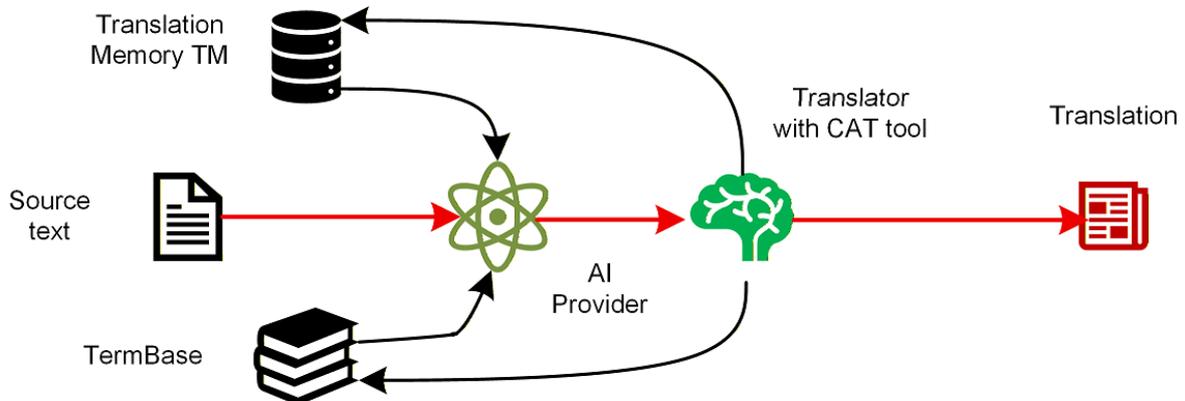


Figure 7: Light Post-Editing

Light post-editing works similarly to full post-editing. The post-editor focuses basically only on the target text and consults the source text only if there is an apparent problem in the machine-translated text. Unless the translator explicitly writes “Hold” in the window that appears when clicking on check in, the translation is forwarded automatically to the client. In this model, the post-editor relies primarily on the machine-translated output and does not systematically compare it with the source text.

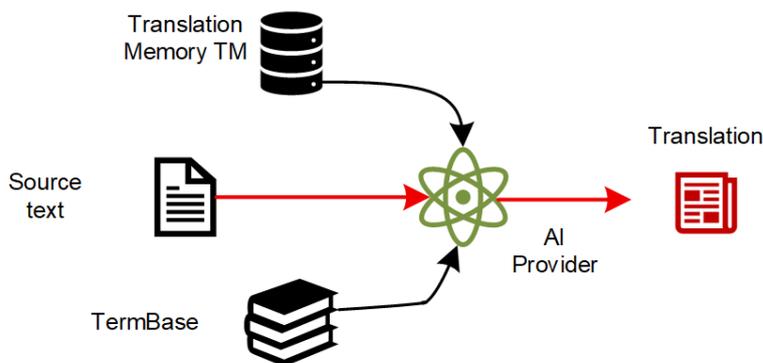


Figure 8: Automatic Translation

The Automatic Translation model is the simplest. It sends the text to ChatGPT, DeepL, or any other well-known LLM Provider and translates the text. The translation is always done using the Trados API. It synchronizes the terminology in the Termbase and prompts the Translation provider to implement fuzzy matches. Full matches are always translated in the same way without modifications.

Automatic Translation via TTN is particularly useful when the client or their organization has large translation memories and the terminology is well defined in the TermBase, since the terminology-aware processes take into consideration existing translations and approved terms. This allows the system to produce output that is more consistent with the client’s established language.

4.3 Translation Archives

TTN TMS clients are members of different user groups. One of the most important groups is the archive group. A member of an archive group can see and download the translations of other members within that group. Usually, an organisation has different archive groups. It is not suitable for texts from the HR department to be accessible to all other users. However, translations from the Press and Media Department can be seen and downloaded by all members.

TTN maintains a full-text archive for all source and target texts. Therefore, all files are converted to HTML files.

Advanced search Return

Search terms:

File name:

Time window: From: To:

User:

Dateifformat:

Source language(s)	Target language(s)
<input type="checkbox"/>  English	<input type="checkbox"/>  English GB
<input type="checkbox"/>  French	<input type="checkbox"/>  French
<input type="checkbox"/>  German	<input type="checkbox"/>  German for Switzerland
<input type="checkbox"/>  Italian	<input type="checkbox"/>  Italian
<input type="checkbox"/>  Spanish	<input type="checkbox"/>  Spanish

Figure 9: Full-text search in translation archive

The archive search allows sophisticated searching by search terms, languages, format, and other criteria.

Search terms: File name: From: To:

Nr.	Type	Src	Trg	Order Name	Originator	Deadline	Order Date	Files	Words	Characters	Pb	CHF																																																
75222		DE	FR	SIF202511011337_snowweather	*	01.11.25 15:30	01.11.25 14:38	1	302	1 672		150.00																																																
<div style="display: flex; justify-content: space-between;"> Translations Documentation </div> <table border="1"> <thead> <tr> <th>Src</th> <th>Trg</th> <th>File name</th> <th>Bytes</th> <th>Words</th> <th>Characters</th> <th>PB</th> <th>CHF</th> </tr> </thead> <tbody> <tr> <td>DE</td> <td>FR</td> <td>sif202511011337_snowweather.HTML</td> <td>4 449</td> <td>302</td> <td>1 672</td> <td></td> <td>150.00</td> </tr> <tr> <td colspan="8">Trg = Dateiname Übersetzer Order Sent Wörter Zeichen PB CHF</td> </tr> <tr> <td>FR</td> <td></td> <td>sif202511011337_snowweather_FRE.html</td> <td></td> <td></td> <td></td> <td></td> <td>50.00</td> </tr> <tr> <td>IT</td> <td></td> <td>sif202511011337_snowweather_ITA.html</td> <td></td> <td></td> <td></td> <td></td> <td>50.00</td> </tr> <tr> <td>GB</td> <td></td> <td>sif202511011337_snowweather_GBE.html</td> <td></td> <td></td> <td></td> <td></td> <td>50.00</td> </tr> </tbody> </table>													Src	Trg	File name	Bytes	Words	Characters	PB	CHF	DE	FR	sif202511011337_snowweather.HTML	4 449	302	1 672		150.00	Trg = Dateiname Übersetzer Order Sent Wörter Zeichen PB CHF								FR		sif202511011337_snowweather_FRE.html					50.00	IT		sif202511011337_snowweather_ITA.html					50.00	GB		sif202511011337_snowweather_GBE.html					50.00
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>		DE	FR	SIF202510271359_snowweather	*	27.10.25 16:00	27.10.25 15:00	1	491	2 738		187.80																																																
>		DE	FR	SIF202510261424_snowweather	*	26.10.25 16:15	26.10.25 15:25	1	472	2 622		179.85																																																
>		DE	FR	SIF202510251235_snowweather	*	25.10.25 15:30	25.10.25 14:36	1	467	2 539		174.15																																																
>		DE	FR	SIF202510241309_snowweather	*	24.10.25 16:00	24.10.25 15:10	1	438	2 406		165.15																																																
>		DE	FR	SLF_Warn_24_10_25	*	24.10.25 12:15	24.10.25 11:20	1	176	1 019		100.00																																																
>		DE	FR	SIF202510231403_snowweather	*	23.10.25 17:00	23.10.25 16:05	1	489	2 651		181.95																																																
>		DE	FR	SIF202510221246_snowweather	*	22.10.25 15:45	22.10.25 14:47	1	540	2 989		205.05																																																
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>		DE	FR	Maria_ÜBERS	Bettzieche Jochen	27.10.25 20:00	22.10.25 12:39	1	1 052	6 391		754.10																																																
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>		DE	FR	SIF202510051301_snowweather	*	05.10.25 16:00	05.10.25 15:01	1	112	665		150.00																																																
>		DE	FR	Einleitung LuR 2025	Hofmänner Marion	29.09.25 16:00	23.09.25 16:08	1	1 812	12 794		1670.05																																																

Page size: 18 Page 1 from 340, Orders 1 to 18 from 6112

Figure 10: A three-level list provides fast and easy access to the desired search results

The archive presents results in a three-level list, facilitating quick access to completed or pending orders. All order information, including documentation files, instructions, or XLIFF files, can be found with a few clicks.



Figure 11: Translation archive with pictures in HTML in browser

Since all files are converted into HTML, the content can be displayed directly in the browser and downloaded. The integration of pictures, graphs, and schemas allows for quick orientation within the text.

Thanks to the conversion into HTML and full-text indexing, the user can search and access all current and executed translations very quickly.

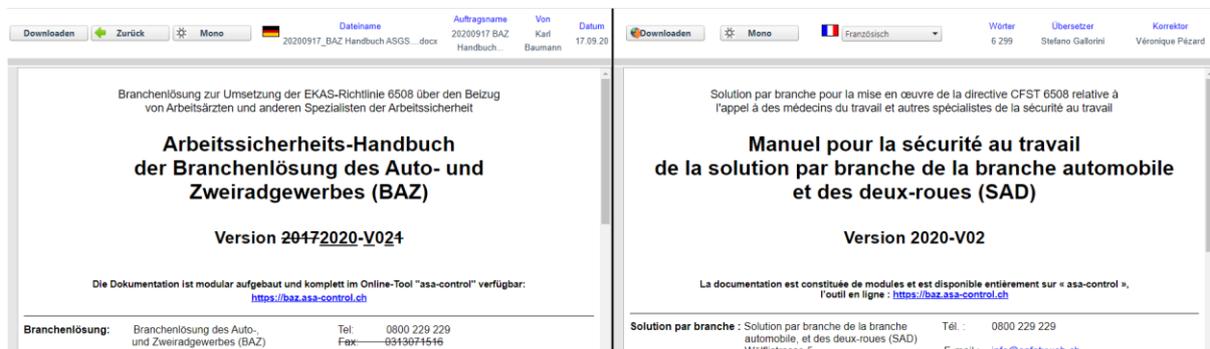


Figure 12: A side-by-side viewer allows analysis of target and source texts

The side-by-side archives allow translators as well as clients to locate and identify search strings and old translations very quickly.

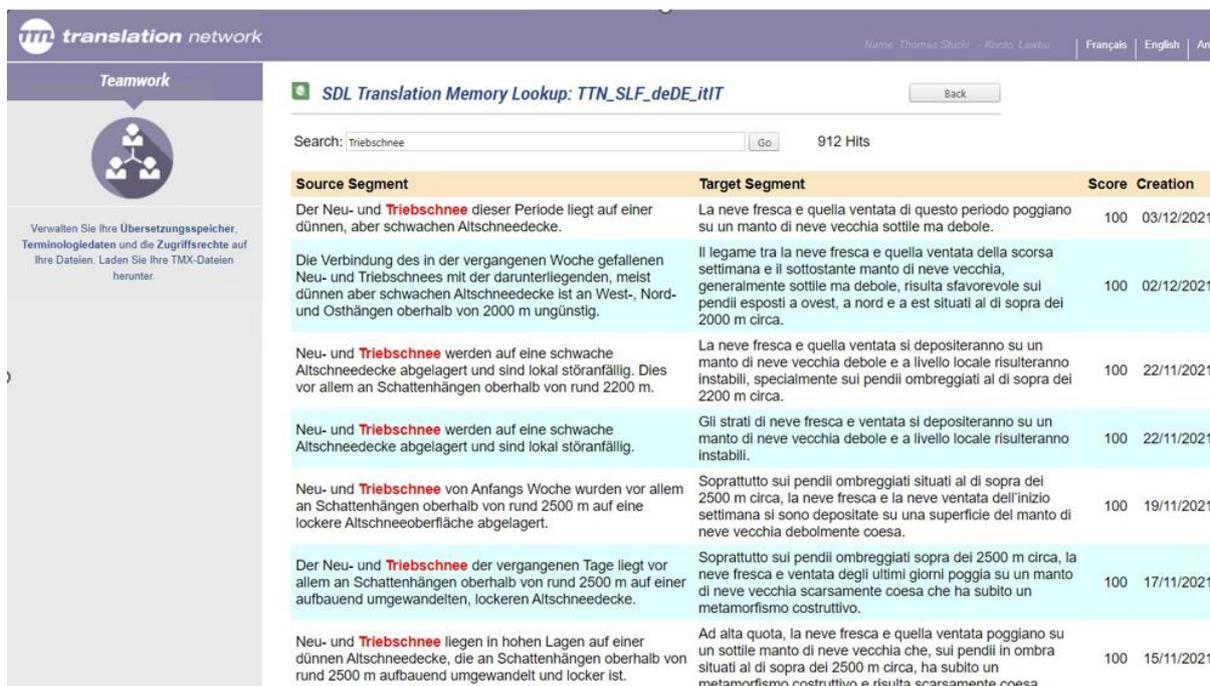


Figure 13: Users can access and search the TMs without third-party software

TTN TMS seamlessly integrates with the GroupShare server, providing authorized users with direct access to Translation Memory content. Depending on their permissions, users can download TM data in TMX format without needing to access GroupShare directly.

The same functionality applies to termbases: users can consult and retrieve termbase content either through TTN TMS or via the multilingual online interface, ensuring transparent and efficient access to all linguistic resources.

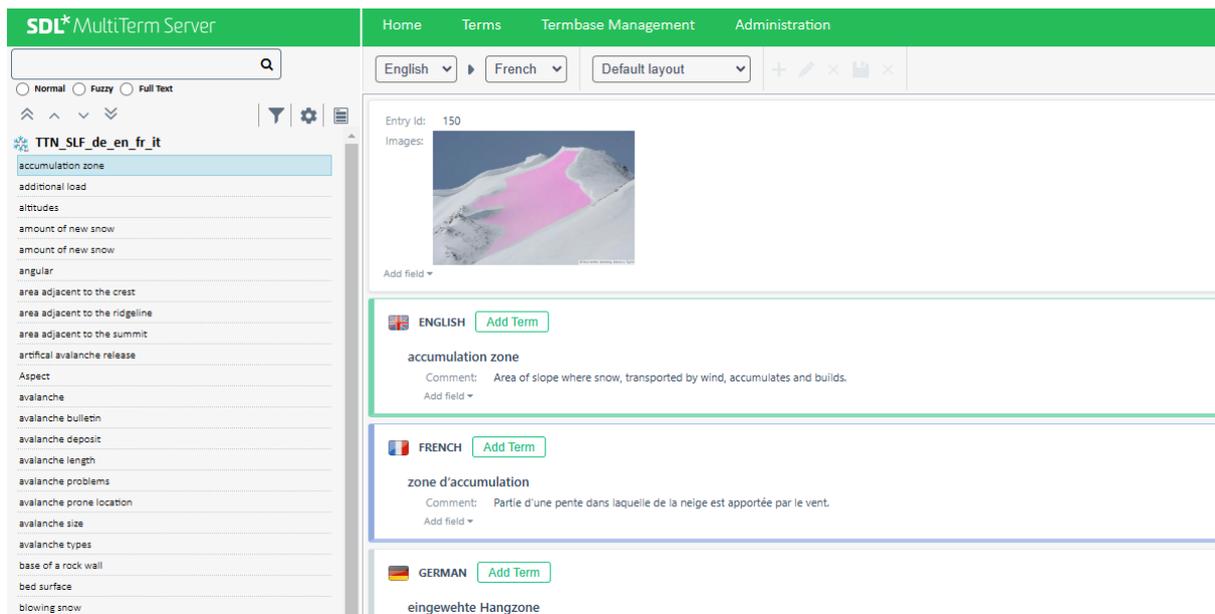


Figure 14: MultiTerm online database

The MultiTerm database and its entries are very important for automatic translations, as the terms are exported to DeepL and other providers. The client can add terms and search terms directly in their database. A link to the database is added in the delivery mail, allowing them to affect the next translation.

Direct access to TMs and TBs guarantees full transparency of the translation resources. The client can verify at any time whether they are properly maintained, resulting in greater confidence in the overall process.

4.4 Access to Translator Database

The client can – if configured – get a link to the translator database, where they can access the profile of the translators and proofreaders.

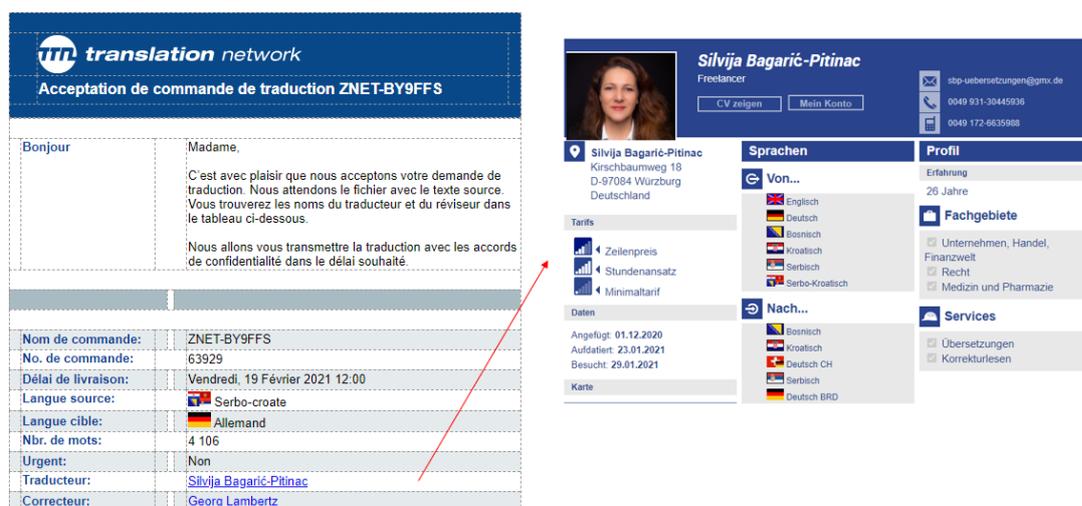


Figure 15: Access to translator and proofreader profile

The system can be parameterized to insert a link in each translation delivery report that goes to the translator Database, where the client can retrieve information about their translation

team. This allows them to ensure that the translation team is qualified or, if authorized, restrict the team to their preferred translators.

4.5 Feedback Functions

TTN offers powerful feedback functions that allow clients to rate each translation. These ratings have a direct impact on the selection of the translation team.

Feedback Translation order: SIF202510281352_snowweather

File name: sif202510281352_snowweather_FRE.html
 Source Language:  Target Language: 
 Translation Manager: Bächtold Martin
 Translator: Teller Léon

Corrected version:

Drop Zone

Drop the corrected file here.

Evaluation

Orthography: ★★☆☆☆☆☆☆

Grammar: ★★☆☆☆☆☆☆

Legibility: ☆☆☆☆☆☆☆☆

Accuracy: ★★☆☆☆☆☆☆

Terminology: ★★☆☆☆☆☆☆

Formatting: ★☆☆☆☆☆☆☆

Overall grade: ★★☆☆☆☆☆☆

Figure 16: Client feedback function with evaluation

The client can upload a revised version. The old version will be replaced in the archive, and the translator and the proofreader receive a summary where all changes are listed by email. The new file is retrofitted into the Translation Memory – this procedure is explained later.

The feedback function allows the Translation Manager to know if the client is satisfied with the service. If there is unsatisfying feedback, they can change the translator or the whole team.

4.6 Statistics and Charts

The system offers statistics per language, turnover, and much more. The invoices – if applicable – can be edited and controlled online.

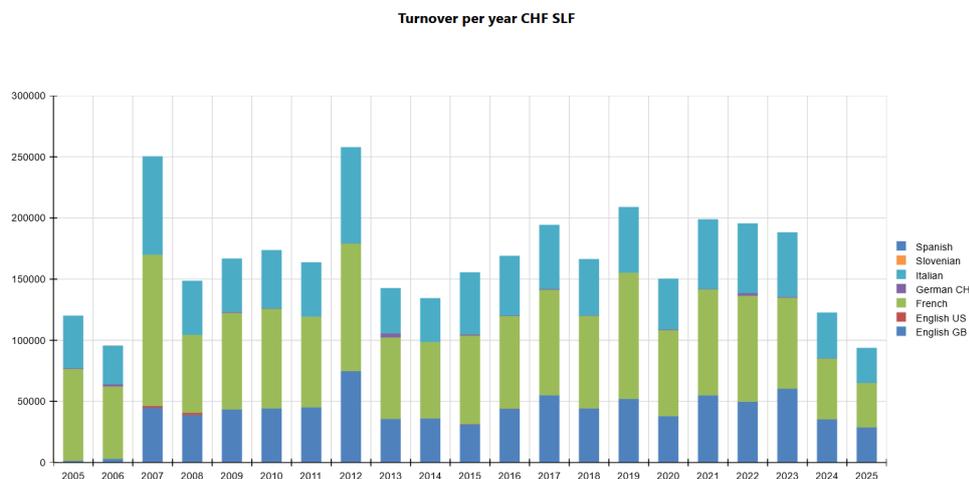


Figure 17: Graphics for turnover, language demand, words translated

A complex cost analysis system allows the organisation to determine if the team and the whole department are working efficiently.

4.7 Invoicing

There is no universally standardised invoicing system for translation services, which results in significant complexity. Translation agencies are required to submit tenders, while each organisation defines its own highly specific invoicing procedures within the technical specifications document. These requirements often include customised match rate bands for CAT tools, and invoicing preferences that may be based on source or target text, word count, line count (with or without spaces), and numerous other metrics.

TTN TMS, a translation management system developed over more than 30 years, accommodates all known invoicing variations.

Réf. du contrat: Traduction – 2001.1050.333

Réf: 0504000706

Période de facturation: 03.11.25 - 01.12.25

N° de facture: 125958

Genève, le 01.12.2025

Conditions de paiement : 30 jours net

N° TVA CHE-106.314.704

N°	Nom/Fichier/Langues	Total CHF
75218	ZNET-DMXJW6_TR_06001 Mots estimés: 458 Mots traduits: 564 Code de facturation: 3.4.1 Standard Centre de coûts: 5030 - Dem Prest II Mot HT: 0.40 HT: 225.60 TVA: 18.25 TTC: 243.85 Serbo-croate ==> Allemand	225.60
75247	ZNET-DN4BL3_TR_06008 Mots estimés: 618 Mots traduits: 680	275.60

Figure 18: Extract of an invoice with client specific data

Invoices are sent as PDF documents via email. They are also accessible online, providing full transparency and enabling verification of word counts as well as confirmation of the accuracy and regulatory compliance of the invoiced amounts. Invoices are generated in country-specific formats; in Switzerland, for example, a QR code is required in accordance with local invoicing standards.

5 TTN SDL Server: Connection to GroupShare

5.1 Integrated Computer-Assisted Translation Tool (CATT)

Before detailing the interface for translators and proofreaders, it is important to highlight the seamless integration of the Computer-Assisted Translation Tool (CATT) within the overall system. This integrated approach provides significantly greater advantages and convenience than using a standalone application. By embedding the CATT directly into the translation management workflow, users gain immediate, unified access to all translation resources without having to switch between disparate tools.

The seamless integration ensures a continuous workflow and full system interoperability: translation tasks flow uninterrupted through the platform, and data is synchronised automatically across components. In contrast to siloed setups, the unified solution avoids duplicate work and manual data transfers – if CATT and management systems are used separately, the same tasks often end up being repeated, leading to inefficiencies. An integrated CATT therefore markedly improves operational performance and user experience by streamlining processes and automating repetitive tasks. Translators can work more efficiently and maintain consistent terminology and style across all projects, since the system reuses existing translations and enforces uniform standards. In essence, the unified CATT system creates a comprehensive translation ecosystem that optimises efficiency, consistency, and quality, providing a strong foundation upon which the translator and proofreader interface can further enhance productivity and continuity.

5.2 Trados GroupShare Server

At the core of this integrated setup is SDL Trados GroupShare, a high-performance enterprise translation memory system developed by RWS Group. GroupShare has been fully embedded into TTN's CATT container since 2012, where it operates as the primary translation engine. It enables centralised, server-based translation management and offers full CATT functionality via both Trados Studio and a built-in online editor. This allows translators, reviewers, and project managers to collaborate in real time using either desktop or browser-based tools, all connected to the same translation memory and terminology repositories.

GroupShare also delivers superior performance in fuzzy match retrieval and concordance searches when compared to other TM solutions, particularly in high-volume environments. Its integrated MultiTerm database supports advanced morphological search, lemmatisation, and compound decomposition – essential for technical and multilingual domains. Although the native user interface is limited in automation capability, TTN has overcome this by developing the TTN-SDL Server, which manages all advanced communication between GroupShare and the TTN platform. This ensures that GroupShare functions as a seamlessly integrated engine within the AI-powered TTN TMS, enabling scalable, secure, and efficient translation operations that meet the demands of even the most complex institutional environments.

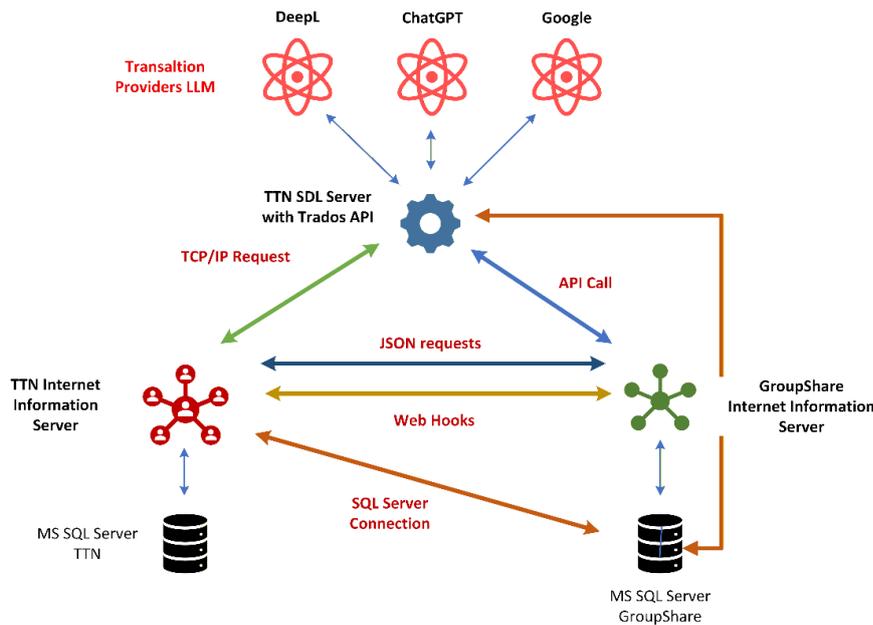


Figure 19: TTN SDL Server ensures communication with GroupShare

TTN TMS utilises a dedicated application called TTN SDL Server to abstract away the complexity of the GroupShare interface. This specialised TCP/IP server acts as an intermediary between TTN’s web portal and the GroupShare platform, automatically handling user requests (e.g., new project creation, translation memory integration, user permission management).

TTN SDL Server abstracts the complexity of GroupShare by automating project setup, translation-memory and termbase binding, and permissions, so workflows run faster and more consistently with fewer manual bottlenecks. Users work only through the simple TTN web interface, improving usability while the server handles all background operations transparently. The architecture scales to high volumes, integrates cleanly with the wider TTN TMS and existing systems, and increases reliability by reducing errors and repetitive tasks.

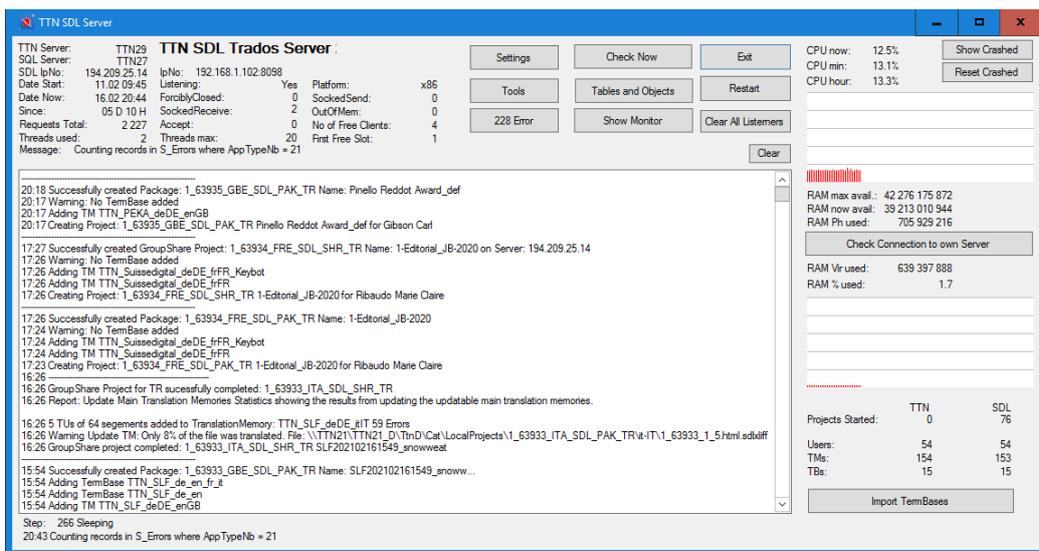


Figure 20: TTN SDL Server publishes projects on the GroupShare server

TTN-SDL creates Trados projects and publishes them on the GroupShare server, embedding the necessary Translation Memory and Termbases.

As soon as the link is ready, the system sends an email to the translator and publishes the link online to be opened with the GroupShare online editor. The translator or proofreader can also open the project in Trados Studio and may also receive Trados packages or bilingual review files.

The TCP/IP server developed by TTN automates the task, assigns the required access rights, creates new Translation Memories when a language pair is not yet available, and adds new languages to the TermBases as needed. It ensures appropriate access rights for translators and proofreaders and revokes them once the job is completed.

Automatic translation in Trados using providers such as DeepL, ChatGPT, or Gemini is usually carried out through plugins, which come with several disadvantages. The translator or proofreader must purchase an API code and a subscription. Furthermore, these plugins cannot enter a conversational mode with the language providers, and in most cases they only take full matches into account during pre-population. For a translator, however, an 80% or 90% match is often more valuable than a raw machine translation. This is why TTN-SDL pre-translates the XLIFF files directly without relying on plugins.

5.3 Import and Export Tools

TTN-SDL is the centrepiece of the system. It answers terminology and Translation Memory requests, and exports and imports Termbases and translation memories.

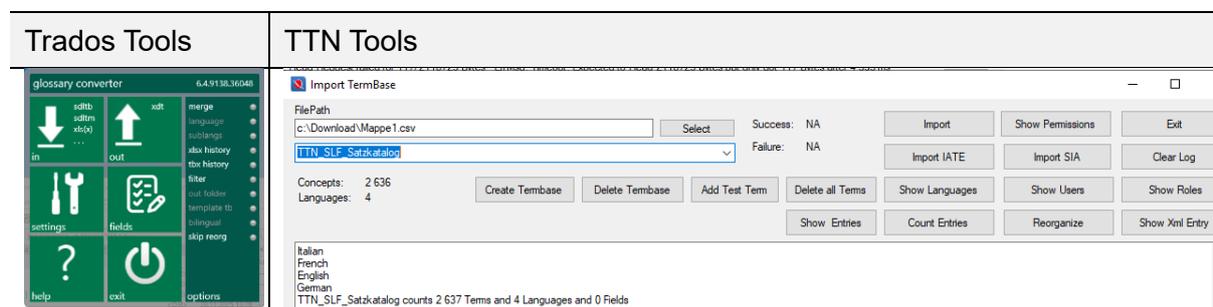


Figure 21: Custom TTN termbase and TM import tools vs. Trados tools

The official Trados tools are limited in functionality and format compatibility, and it is impossible to import most formats. The TTN Application includes a wide palette of tools to import and export a wide variety of formats.

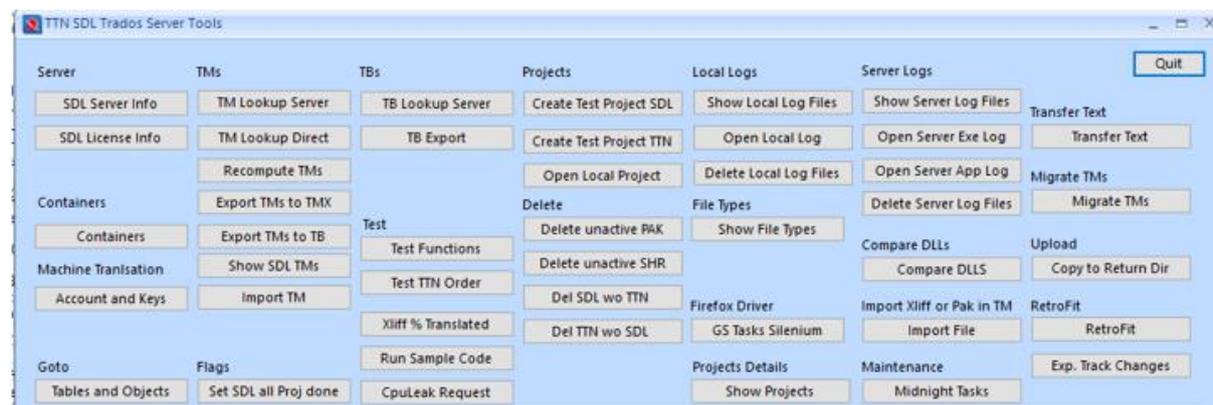


Figure 22: The server is continuously adapted to new MT providers

It includes a large range of test tools that allow system developers to quickly adapt the program to the newest innovations.

5.4 Retrofit tool

One of these tools is the Retrofit tool. Many translations from universities and other institutions include scientific or political papers written by bilingual specialists. Similarly, many Swiss federal offices have internal language departments that review outsourced translations once they are submitted. These specialists revise the translated papers and add valuable improvements and terminological precision, especially for scientific literature. Unfortunately, they often do not use CATT tools, and their corrections are made only in Word—frequently without proper track changes—and are sent back as feedback to the translation headquarters. This is where RetroFit becomes essential. Since the retrofit process in Trados cannot be automated, the automatic Retrofit tool of the TTN TMS takes over.

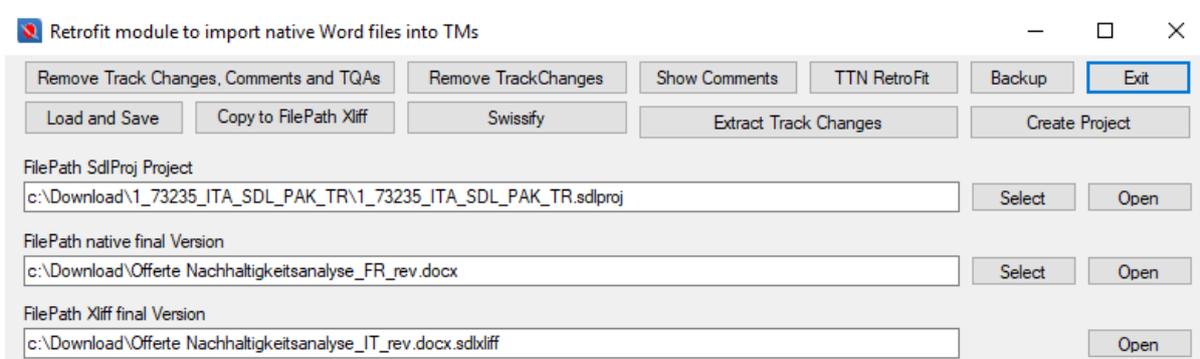


Figure 23: Retrofit tools to import native Word files into TMs

The client can upload revised translations. The feedback files are compared with the delivered translation, and the changes are automatically integrated into the XLIFF files. The Translation Memory is updated without any human intervention. These tasks run in the background, but a developer interface is available to debug potential issues.

5.5 Document analysis

TTN TMS automatically incorporates the XML analysis files generated by Trados when a project is created. The system interprets this XML and displays an easy-to-read HTML report in the user's browser. This way, all stakeholders can clearly view the analysis results without needing any external tools.

The analysis report is organized by segment and match type, providing a comprehensive overview of translation leverage. Segments are categorized as full matches, fuzzy matches, repetitions, or new (unmatched) segments. For each category, the report provides key metrics, including:

- **Segment and Match Counts:** The number of segments in each match category (for example, the count of 100% matches, high fuzzy matches, etc.).
- **Character/Word Totals:** The total number of characters or words in those segments. This can be configured per project – for instance, some projects track word counts while others use character counts (common for languages like Chinese or Japanese).

- **Leverage Savings:** How much content is “saved” thanks to matches and repetitions. In other words, this shows the volume of text that does not need new translation due to existing translations. These savings are displayed as both a raw count of characters/words and as a percentage of the total project volume. For example, a high fuzzy match (95–99% similarity) might count roughly 65% of its words as already translated (saved), meaning only about 35% requires new translation. By contrast, very low similarity matches may be treated as **no savings** since they likely need full re-translation.
- **Weighted Estimates and Pricing:** TTN TMS applies industry-standard weightings for each match type to calculate the effective work volume. Exact matches and repetitions are weighted at a lower percentage of their raw word count (reflecting less effort), whereas new segments are weighted at 100%. This produces a weighted word/character total that reflects the true translation effort after accounting for translation memory leverage. The system then multiplies these weighted counts by predefined rate factors for each category, automatically converting the analysis results into monetary terms. In effect,

TTN TMS can instantly compute translator compensation or overall project cost based on the analysis data.

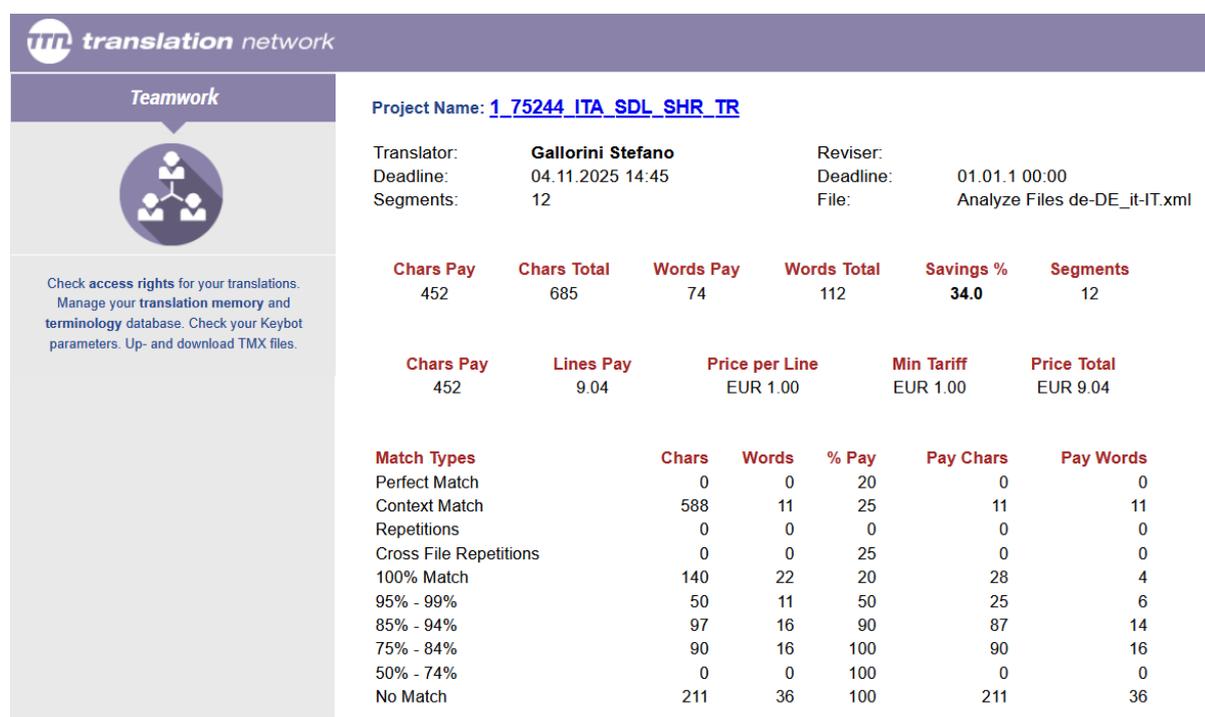


Figure 24: Document analysis in the web browser

These analysis statistics are not just for show – they are actively used for financial and management purposes. TTN TMS uses the detailed breakdown to automatically calculate translator compensation according to the organization’s rate scheme. Each match type corresponds to a specific pay rate (for example, translators might be paid a percentage of the full rate for fuzzy matches to reflect the partial work required). The system applies these rates to the analysis counts to determine how much each translator should be paid for the project. These calculations then feed into credit note generation and other bookkeeping processes, streamlining the project’s financial and administrative follow-up.

6 Translator and Proofreader Interface

6.1 Documentation and Training

TTN TMS provides concise, specific user guides that show translators how to use GroupShare, Trados, MultiTerm, and AI post-editing within the TTN interface. Translators receive focused onboarding to the TTN workflow, with a basic familiarity with CAT tools assumed. Order handling is intentionally minimal: the translator opens the assignment via a link, checks out the file, completes the work, and checks it back in. Translators can also use the Trados package, which is sent by email. Administrative steps are reduced to a few clicks, enabling them to focus on quality and timely delivery.

Familiarity with the functioning of a CATT system is required. External contributors without CATT experience can work with review files instead; however, translators who lack CATT knowledge should not be assigned orders for quality reasons. Most translators are familiar with Trados-style CATT systems, which held a 74% market share in 2013.

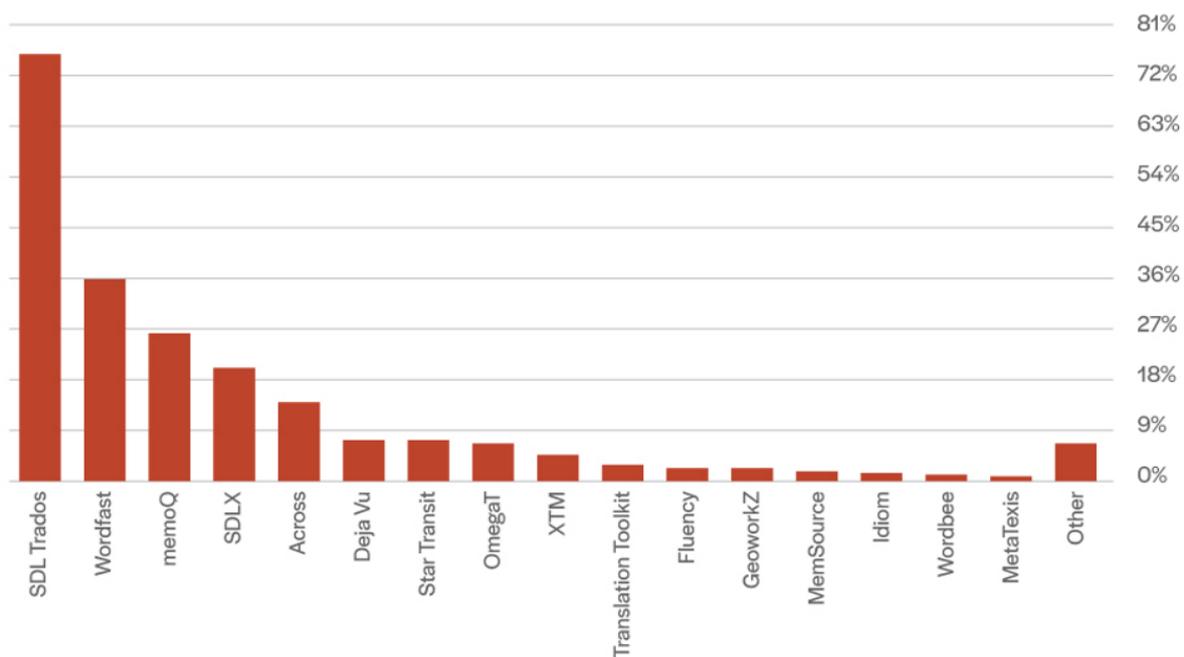


Figure 25: Most translators are familiar with Trados system

According to recently published articles, Trados now has over 80% market share, as smaller CATT systems are unable to keep pace with the rapidly evolving AI connectors.

6.2 Order Assignment

Upon receipt of an order, the translator may select their preferred notification channel - WhatsApp, SMS, email, or the confirmation webpage. A dedicated, mobile-optimised interface provides real-time assignment alerts and status updates, enabling translators to stay informed and respond promptly from anywhere, at any time.

TTN Translation Network has assigned you Translation order no. 1_72572.
 Please confirm the order by 27.09.24 11:00.
 Source language: German
 Target language: French
 Number of words: 9
 Number of characters: 30
 Deadline: 21.10.2024 09:00 Monday
 You can download the source files from www.ttn.ch/c.

06:14

[Accept](#)

[Refuse](#)



Figure 26: WhatsApp message or mobile phone interface to accept or refuse orders

The order files and order forms are usually transferred by mail if there are no specific security restrictions.


translation network
 Full Post-Editing 1_75428 for 02.12 17:00

Hello Dear Mrs Couchman,

[omitted text]

Please confirm this order at latest by **Thursday 06 November 2025 09:00**.

Deadline:	Monday 10 November 2025 09:30
Quantity:	5 122 characters — 790 words — 102 lines
CAT Count:	Characters: 4 763 (-7.0%) — EUR 125.40
Order Number:	1_75252
Order Name:	Waldbrände_ÜBERS
No. of files:	1 Translation
Client company:	WSL-SLF
Client name:	Jochen Bettzieche
Client website:	www.slf.ch
Company archives:	15 812 Translations
Source Language:	German
Target Language:	English GB
Client File Name:	Waldbrände_ÜBERS.docx
Source File:	1_75252_1_4_GER.docx
Your File Name:	1_75252_1_4_GBE.docx
SDL GroupShare:	Open project 1_75252_GBE_SDL_SHR_TR 1_75252_1_4_GBE.xliff
SDL Package:	1_75252_GBE_SDL_PAK_TR.sdlppx
TM:	TTN_SLF_deDE_enGB
Termbases:	TTN_SLF_de_en_fr_it TTN_SLF_de_en TTN_SLF_Satzkatalog
Teamwork:	SLF Kundenforum
Glossary EAWS:	EAWS Glossar
MultiTerm EAWS:	TTN MultiTerm SLF EAWS
SLF Satzkatalog:	TTN SLF Terminology

Figure 27: Mail with order information

When a translation project is assigned, the system sends out a notification email. Depending on the configuration settings, this email may provide access to the source files in any of the following ways:

- *Attached Files*: The native source files are attached directly to the email.
- *Download Link*: The email includes a hyperlink from which the native files can be downloaded.
- *Online Editor Link*: A link is provided to open the project in the Trados GroupShare Online Editor for web-based translation.
- *Trados Studio Link*: A special link is included that opens the XLIFF file directly in the desktop Trados Studio application.

In addition to file access, the notification email contains important details about the translation project. It typically includes information such as:

- *Order Details*: The identity of the requester or client who placed the order (the *orderer*).
- *Terminology Bases*: References to relevant *MultiTerm* termbases.
- *Translation Memories*: References to the applicable translation memories (TMs) for leveraging existing translations.

For any client-specific, department-specific, or field-specific guidelines, translators should consult the client forum.

[SLF Kundenforum](#)

[TTN-Terminologie-Datenbank \(EAWS\)](#)

[Pflichtenheft](#)

[Team](#)

[WSL-Leitfaden geschlechtergerechte Sprache](#)

[Richtlinien Bundesverwaltung](#)

[Interpretationshilfe Bulletin DE FR IT EN](#)

[EAWS Glossar](#)

[TTN-Satzkatalog-Datenbank](#)

[Satzkatalog](#)

[Merkblätter](#)

[Textbeispiele Gendersprache](#)

[English Style Guide ETH](#)

[Gefahrenstufen DE FR IT EN](#)

Figure 28: Client, department or field specific forum

A centralised forum tailored to each client, department, or specific task offers direct access to detailed reference materials and guidance. This forum serves as a single source of truth by consolidating all relevant reference documents in one place. These include client-specific guidelines and style guides (covering rules such as gender-inclusive language usage) and links to external terminology databases, along with any other project-specific preferences or resources. By collecting such information centrally, the forum ensures that new translators can swiftly find the guidance they need – facilitating faster onboarding and enabling them to produce consistent, high-quality translations that adhere to the buyer’s preferred terminology and style. This approach also fosters effective knowledge sharing and ensures guidance is tailored to each client’s needs, while reducing administrative overhead by minimising repetitive inquiries and the manual distribution of materials.

6.3 Order Execution

Most Translators have a permanent link to the Translation Management dashboard, where they handle the orders.

Translation Management

Requests

No Requests

Unconfirmed Orders

1 unconfirmed Order

Private Archive: Carl Gibson

2 outstanding orders

3 889 executed Orders

No Time Reservations

Work Schedule

Company Archives / Client Forums

Type	Name	Orders
	SIA	736
	SLF	6 117
	Richtlinien Bundesverwaltung	
	SLF WSL-Institut für Schnee- und Lawinenforschung, Davos	
	EHB Eidg. Hochschule für Berufsbildung	

Figure 29: Translator dashboard with overview

The translator is provided with a personal dashboard displaying a comprehensive overview of all assigned orders. They can access the translation archives in the same manner as described in the client section. In addition, the dashboard provides direct access to the relevant client forums for each active assignment, offering quick and structured access to all job-related information, including guidelines, preferences, and reference materials essential for ensuring accuracy and consistency.

1 unconfirmed Order
No Time Reservations
2 outstanding orders

Accept	Refuse	1 Up	Download	Open	Details	Role	Src	Trg	Order Name	From	Company	Deadline	Confirm by	Files	Words	Characters																																	
						1_75251			Glossary 142 and 143	Fleischer Kerstin	SIA	10.11.25 09:00	06.11.25 09:00	2		- 2																																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>#</th> <th>Type</th> <th>Role</th> <th>Src</th> <th>Trg</th> <th>Deadline</th> <th>Your File Name</th> <th>Client file name</th> <th>Bytes</th> <th>Words</th> <th>characters</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td>Translator</td> <td></td> <td></td> <td>10.11.25 09:00</td> <td>1_75251_1_2_GBE.docx</td> <td>CTF-SIA-142-143-144-DE-FRZ-IT-ENGL 2511xx_def.docx</td> <td>33 721</td> <td>0</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1_75251_2_GER_Instructions.do_not_trans.docx</td> <td>Instructions for Languanet.docx</td> <td>458 366</td> <td>1 458</td> <td>8 816</td> </tr> </tbody> </table>																	#	Type	Role	Src	Trg	Deadline	Your File Name	Client file name	Bytes	Words	characters	1		Translator			10.11.25 09:00	1_75251_1_2_GBE.docx	CTF-SIA-142-143-144-DE-FRZ-IT-ENGL 2511xx_def.docx	33 721	0								1_75251_2_GER_Instructions.do_not_trans.docx	Instructions for Languanet.docx	458 366	1 458	8 816
#	Type	Role	Src	Trg	Deadline	Your File Name	Client file name	Bytes	Words	characters																																							
1		Translator			10.11.25 09:00	1_75251_1_2_GBE.docx	CTF-SIA-142-143-144-DE-FRZ-IT-ENGL 2511xx_def.docx	33 721	0																																								
						1_75251_2_GER_Instructions.do_not_trans.docx	Instructions for Languanet.docx	458 366	1 458	8 816																																							

Click on this icon to upload the translations.

Figure 30: List with unconfirmed orders

The translators and proofreaders can access the order data through multi-level listings and open the files either by downloading them or by viewing the HTML version in the browser.

2 Outstanding Orders
3 Time Reservations
3 Outstanding Orders

1 Up	Download	Open	Details	Role	Src	Trg	Order Name	From	Company	Deadline	Files	Words	Characters
				1_75251			Glossary 142 and 143	Fleischer Kerstin	SIA	10.11.25 09:00	2		- 2
				1_75252			Waldbrände_ÜBERS	Bettzieche,Jochen	WSL-SLF	10.11.25 09:30	1	790	5 122
				1_75255			SIA_142_and_143	Fleischer Kerstin	SIA	26.11.25 22:00	5	15 475	107 596

Click on this icon klicken, um die Übersetzungen hochzuladen.

Figure 31: List with outstanding orders

When a translator wants to begin work on an order, they generally have three options. The most common method is to click the GroupShare link, which opens the project in the Trados desktop application. The translator then checks out the project files and begins working on the translation in their local environment.

Another approach, used by a smaller group of translators, is to work with a translation package. A package contains a subset of the main Translation Memory (TM) for the project and is configured so that the Trados application still connects to the centralized TM and terminology servers. This method can be more powerful because the concordance search covers the entire server TM with all available segments, providing more context and reuse possibilities.

The third option is to use the GroupShare Online Editor. In this case, the translator clicks on the link to the online editor, which opens the project in a web-based interface. The translation is done directly in the browser, and the translator does not need to purchase a CAT tool license because access is provided via the TTN network.

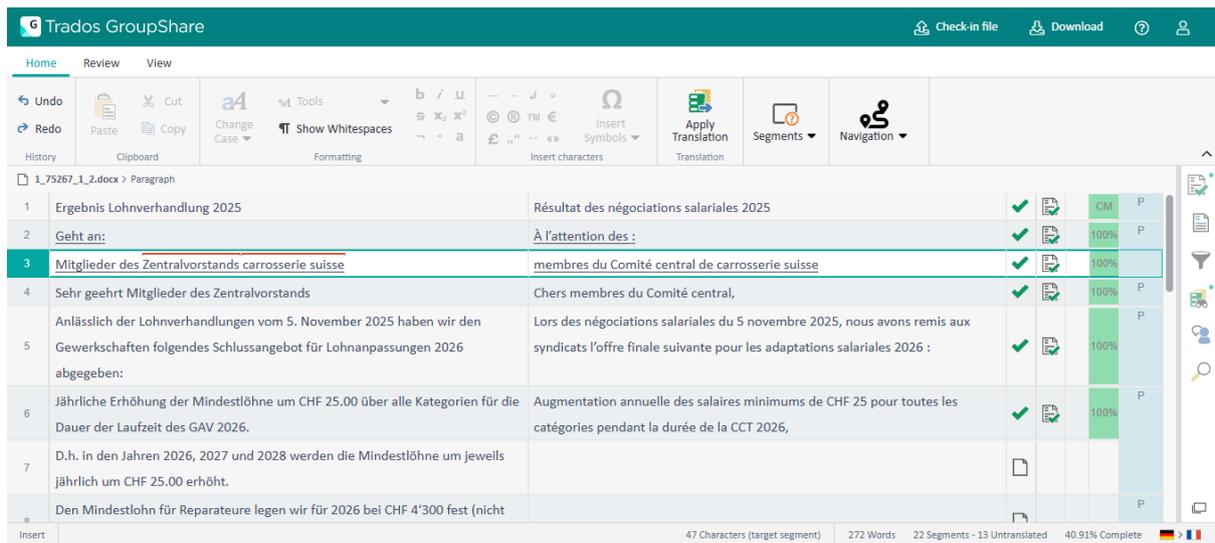


Figure 32: The GroupShare editor opens directly from the TTN TMS in one click

The terms stored in the terminology database are highlighted in red, and a dedicated window displays fuzzy matches from the TM server. To add a new term to the terminology database, the term pair must be activated in both the source and target windows and can then be added to the central database with a single click.

Projects are configured so that they cannot be completed without the mandatory quality assurance (QA) check. During QA, numerical data and overall consistency are verified, including whether the terminology used is consistent with the MultiTerm database. After QA approval, the file is checked in or uploaded to the server. Users can also leave segment-specific or general comments, which are stored in the XLIFF file, extracted by TTN SDL, and made visible to the Translation Manager.

For quality control, order execution time calculation, and performance ranking, it is important that the proofreaders record the time. The system sums up the time used by the proofreader, and they get a rate for revision time per line or per word.

Contrôle et adaptation de la note de crédit

Nom de commande: ZNET-BY9FFS_TR_00299 No. de commande: 63936
Votre nom de fichier: 1_63936_1_2_GFR.docx
Nom du fichier du client: ZNET-BY9FFS_TR_00299.pdf
Fichier source: 26 689 Caractères 4 106 Mots
Votre fichier téléchargé: Comptage impossible

Base de prix: Express/Rabais:
Time:  Autre valeurs en minutes
Montant: CHF 42.04 OK

Évaluez cette traduction de mauvais = 1 à excellent = 5

★ ★ ★ ☆ ☆ Commentaire:

Envoyer les fichiers Feedback au traducteur

Avez-vous découvert les erreurs que le traducteur ne devrait pas commettre à l'avenir? La fonction de feedback compare vos fichier avec les fichiers du traducteur et lui envoie les fichiers par email.

Télécharger Accord de confidentialite

Obtenir formulaire

No file chosen

Figure 33: Time recording and quality assessment

The proofreader can enter the time used to check the translation. They can also rate the translation. These values can be used by the AI module that assigns translation orders, as we will see later.

6.4 Order Details

Translators and proofreaders have access to a consolidated overview of all order details. From there, they can communicate with translators for other languages, monitor progress, and access instructions, documentation, translation memories (TMs), termbases, PDF files, machine translations, AI-based quality checks, client instructions, and other project resources.

Order: **1_75316** **Uebersetzungen_IMIS-S.....** Your Deadline: **Tuesday, 18 November 2025 by 09:00**

Src: **German** Lines: **31** Words: **228** Characters: **1 588** Files: **1** Documentation: **1** Manager: **MHB**

Client:

Name: **Oester** Firm: **WSL-SLF**

Private Archive Firm Archive TMs & TermBases

You:

Role: **Translator** Name: **Teller Léon**

My Archive Upload Download Return

Project Files

1) Uebersetzungen_IMIS-Stationen_DE.docx			
	Filename: Uebersetzungen_IMIS-Stationen_DE.docx	Filesize: 14 858 Bytes	Chars: 1 588 Words: 228

Routing Cards for file: 1) Uebersetzungen_IMIS-Stationen_DE.docx

RI	Lng	Dn	Show	Status	Deadline	User	No	Your File Name	Savings	TrgCnt
					18.11.25 09:00	<u>Teller Léon</u>	4	1_75316_1_4_FRE.docx	<u>5.6%</u>	1 588
					18.11.25 15:30	<u>Ribaudo Marie Claire</u>	7	1_75316_1_7_FRE.docx		
						<u>Bächtold Martin</u>	9	1_75316_1_9_FRE.docx		
					18.11.25 16:30	Oester Roman	2	Uebersetzungen_IMIS-StationUebersetzung		

English GB French Italian

Documentation

Dn	Show	No	Typ	File Name	Lang	Chars	Bytes	Add Date
		2		1_75316_2_Online_Comment_C...txt			274	13.11.25 16:11

CAT Projects

ProjectName	Type	Role	Trg	Deadline TR	Translator	Deadline CO	Revisor
1_75316_FRE_SDL_SHR_TR				18.11.25 09:00	<u>Teller Léon</u>	18.11.25 15:30	<u>Ribaudo Marie Claire</u>
1_75316_FRE_SDL_PAK_TR				18.11.25 09:00	<u>Teller Léon</u>	18.11.25 15:30	<u>Ribaudo Marie Claire</u>

Translation Memories

Name	Type	Src	Trg	Description	Entries	Created	Computed
TTN_SLF_deDE_frFR				WSL Institute for Snow and Avalanche Research SLF	95 787	08.10.2025	05.11.2025
TTN_SLF_deDE_frFR_Keybot				WSL Institute for Snow and Avalanche Research SLF	1 248	08.11.2025	05.11.2025

TermBases

Name	CAT	Type	Description	Languages	Concepts	Terms	Created
TTN_SLF_de_it		SDL		2	2	3	08.10.2025
TTN_SLF_de_fr		SDL		2	5	11	08.10.2025
TTN_SLF_de_en_fr_it		SDL		4	163	949	08.10.2025
TTN_SLF_de_en		SDL		2	10	23	08.10.2025
TTN_SLF_Satzkatalog		SDL		4	2 637	10 545	08.10.2025

Figure 34: Order details

The information contained in the order details is linked to the translation archives and to the credit-note system, ensuring that all project data, past work, and financial records remain connected and traceable.

6.5 Credit Notes

The system supports flexible payment models for translators and proofreaders. Pricing can be set per line or per word in either the source or target language, based on time, or according to task type such as light post-editing or proofreading, with or without a minimum charge. For translators, the most commonly used model is CATT-Count, which takes into account the number of full and partial matches. A monthly report ensures full transparency. Translators can open the CATT-Count details, view the source and target text, and, if they have the necessary permissions, adjust the invoice mode.

Credit Note

Line price:	CHF 1.12	Price per hour:	CHF 50.00	Minimum charge:	CHF 1.00	Excel	Send by Mail	Return to Credit Note list	
Number:	126 022	Closing Date:	still open	Opening Date:	30.11.25	Jobs:	8	Total:	CHF 568.55

Your File Name	Client File Name	Order Date	Upload Date	Type	Source Language	Target Language	PB	Price base	%%	Characters in source text	Count	Minutes	CUR	Amount
1_75320_1_3_FRE.docx	Winterbericht_2024_25_FR.docx	13.11.25 19:30	30.11.25 22:15	👁	🇩🇪	🇫🇷	🕒	Time	0	97 450	240	240	CHF	200.00
1_75414_1_5_FRE.docx	PublicReply_ÜBERS.docx	28.11.25 12:17	01.12.25 10:12	👁	🇩🇪	🇫🇷	🕒	Time	0	3 297	30	30	CHF	25.00
1_75415_1_5_FRE.idml	1_75415_1_5_FRE.idml	28.11.25 14:14	01.12.25 11:01	⚙️	🇩🇪	🇫🇷	🗑	CAT Count	0	12 968			CHF	235.20
1_75422_1_4_FRE.html	stf202512011336_snowweather.HTML	01.12.25 14:37	01.12.25 14:58	⚙️	🇩🇪	🇫🇷	🕒	Fix price	0	2 174			CHF	40.00
1_75423_1_2_FRE.docx	05_ZV_2025_12_11_Erläuteru...docx	01.12.25 15:44	02.12.25 08:21	⚙️	🇩🇪	🇫🇷	🕒	Time	0	506	20	20	CHF	16.65
1_75423_2_2_FRE.docx	06_ZV_2025_12_11_Erläuteru...docx	01.12.25 15:44	02.12.25 08:21	⚙️	🇩🇪	🇫🇷	🕒	Time	0	607	7	7	CHF	5.85
1_75423_3_2_FRE.docx	07_ZV_2025_12_11_Erläuteru...docx	01.12.25 15:44	02.12.25 11:41	⚙️	🇩🇪	🇫🇷	🕒	Time	0	424	7	7	CHF	5.85
1_75428_1_4_FRE.html	stf202512021456_snowweather.HTML	02.12.25 16:00	02.12.25 16:16	⚙️	🇩🇪	🇫🇷	🕒	Fix price	0	2 354			CHF	40.00

Figure 35: Extract from a monthly Credit Note

Credit notes are generated automatically and closed at the end of each month. They include a detailed statement of all completed orders and are sent to translators by email. They are also exported to the professional bookkeeping system, which transfers the payment to the corresponding bank account.

Credit Notes

Please send your invoices to accounting@ttn.ch. The fees for your services must match those in the credit notes.

Change payment mode

Turnover by Client and Year

Return

Action	Number	Closing Date	Opening Date	Currency	Total
Open	126022	still open	30.11.25	CHF	568.55
Show	125871	30.11.25	30.09.25	CHF	14 860.25
Show	125799	30.09.25	02.09.25	CHF	10 461.70
Show	125719	01.09.25	03.08.25	CHF	14 298.15
Show	125646	01.08.25	01.07.25	CHF	13 324.05
Show	125584	30.06.25	03.06.25	CHF	9 822.95
Show	125507	31.05.25	02.05.25	CHF	11 289.90
Show	125418	02.05.25	01.04.25	CHF	4 848.60
Show	125342	31.03.25	03.03.25	CHF	11 248.85
Show	125263	02.03.25	05.02.25	CHF	4 316.65
Show	125175	02.02.25	02.01.25	CHF	7 685.15
Show	125087	31.12.24	02.12.24	CHF	7 538.40

Page size: 12 264 items in 22 pages

Return

Figure 36: Credit note overview with annual performance

The system provides an overview of annual earnings and generates analytical data, including turnover by client.

6.6 Workload and Presence Schedules

The system keeps track of all orders and calculates the work load. If the workload is too heavy, the Translation Manager gets a warning, and the system will not automatically forward new orders if the translator does not have enough free capacity.

Work schedule Ribaudo Marie Claire

Monday 03.05.21 18:50

Working Days: Monday Tuesday Wednesday Thursday Friday Saturday Sunday National Holiday

Working Hours: Morning: 08:00 to 12:00 Afternoon: 13:00 to 18:00 Evening: 19:00 to 19:00 Hours/Week: 63:00

Working Speed: Translation: 2 600 Characters/Hour CHF 75,40/Hour CHF 13 104/Month Proofread: 8 000 Characters/Hour CHF 50,00/Hour CHF 12 6

Files Days Holiday Start & End Refresh Return Booked: 15:30 Holiday Slices: 0 Holiday Days: 0,0
Overbooked: 08:24 Work Slices: 64

Days with Workload and Holiday Flag

Day	Date	Holiday	Proof Chars	Proof Words	Proof Lines	Trans Chars	Trans Words	Trans Lines	Time
Mo	03.05.21	<input type="checkbox"/>				21 840	2 957	437	08:24
Tu	04.05.21	<input type="checkbox"/>	14 400	2 218	288	4 550	616	91	03:33
We	05.05.21	<input type="checkbox"/>	18 000	2 772	360	3 380	520	68	03:33

Monday 03.05.21

Hour	Busy	Holiday	File Id	Go	Time	Busy	Holiday
00	Off				18:00	Off	<input type="checkbox"/>
01	Off				18:15	Off	<input type="checkbox"/>
02	Off				18:30	Off	<input type="checkbox"/>
03	Off				18:45	Off	<input type="checkbox"/>
04	Off						
05	Off						
06	Off						
07	Off						
08	Mixed		1_64622_1_2	<input checked="" type="checkbox"/>			
09	Work		1_64622_1_2	<input checked="" type="checkbox"/>			
10	Work		1_64622_1_2	<input checked="" type="checkbox"/>			
11	Work		1_64622_1_2	<input checked="" type="checkbox"/>			
12	Off						
13	Work		1_64622_1_2	<input checked="" type="checkbox"/>			
14	Work		1_64622_1_2	<input checked="" type="checkbox"/>			
15	Work		1_64622_1_2	<input checked="" type="checkbox"/>			
16	Work		1_64622_1_2	<input checked="" type="checkbox"/>			
17	Work		1_64622_1_2	<input checked="" type="checkbox"/>			
18	Off						

Figure 37: Workload calculation for translators and proofreaders

The work schedule calculates translators' workloads in 15-minute increments, providing a clear and precise overview of project planning and time allocation. Translators may also enter planned absences or periods of unavailability (such as holidays), and the system automatically takes these into account when assigning jobs and scheduling tasks. This detailed approach supports accurate resource planning and contributes to quality assurance, thereby ensuring timely project delivery.

The translator, and also the client, can define their user settings in a wide variety of ways.

User Settings

User Data	Credit Notes
Login Data	Translation Rates
Upload New CV	Show link
Upload photo	Search engines
Source Languages	Target Languages
Professional Data	Mother tongue
Order Handling	CAT Server Registration
Opening hours	Work Schedule
SMS and WhatsApp	Payment mode

Figure 38: The user can define the working hours and a whole range of parameters

The different translator and user parameters and the rights to modify them have to be agreed upon with the buyer. The system allows a wide variety of options.

6.7 Resource Planning Calendar

Some clients, such as the meteorological services, police departments, or stock information services, require the presence of dedicated translator teams even on weekends and during Christmas holidays. Proper forward planning is therefore essential. TTN TMS provides tools to create and manage these schedules.

SLF Work Schedule Manager

Date	Translator	Change
03 December 2025 Wednesday	Charlotte Couchman	<input type="button" value="Change"/>
04 December 2025 Thursday	Paul Clarke	<input type="button" value="Change"/>
05 December 2025 Friday	Helen Earis	<input type="button" value="Change"/>
06 December 2025 Saturday	Helen Earis	<input type="button" value="Change"/>
07 December 2025 Sunday	Helen Earis	<input type="button" value="Change"/>
08 December 2025 Monday	Paul Clarke	<input type="button" value="Change"/>
09 December 2025 Tuesday	Paul Clarke	<input type="button" value="Change"/>
10 December 2025 Wednesday	Paul Clarke	<input type="button" value="Change"/>
11 December 2025 Thursday	Sarah Pybus	<input type="button" value="Change"/>
12 December 2025 Friday	Sarah Pybus	<input type="button" value="Change"/>
13 December 2025 Saturday	Sarah Pybus	<input type="button" value="Change"/>
14 December 2025 Sunday	Charlotte Couchman	<input type="button" value="Change"/>
15 December 2025 Monday	Charlotte Couchman	<input type="button" value="Change"/>
16 December 2025 Tuesday	Charlotte Couchman	<input type="button" value="Change"/>
17 December 2025 Wednesday	Helen Earis	<input type="button" value="Change"/>

12

Figure 39: Resource planning calendar for automatic job assignment

The on-duty translator is notified each evening via WhatsApp or SMS that they have an assignment the following day. This ensures that no one misses their shift and that the Translation Manager does not forget to inform the on-duty translation team.

7 Translation Control Interface (TCI)

7.1 Overview

The Translation Control Interface (TCI) is used by translation managers to monitor and manage translation projects.

The system allows the addition of an unlimited number of translation managers.

Translation Managers

TmNo	User	Email	OnDuty	Edit	Login
MHB	Bächtold Martin	ttn@ttn.ch	<input checked="" type="checkbox"/>	Edit	Login
VPE	Pézarid Véronique	vero@ttn.ch	<input checked="" type="checkbox"/>	Edit	Login
OBC	Bächtold Olivier	olivier.baechtold@ttn.ch	<input checked="" type="checkbox"/>	Edit	Login

Figure 40: Translation Managers

Translation Managers can be assigned to individual clients, client groups, or specific orders. When a Translation Manager is on duty, they receive an alert as soon as a new order arrives, an order is delayed, not confirmed, or not completed. Any issue automatically triggers a notification via WhatsApp, SMS, or email.

Translation Managers can—once sufficiently experienced—access more than 500 forms, 98% of which are designed for special cases. In day-to-day operations, they only need to be familiar with around ten forms. Initial training time is very short; however, over the years, they can progress to more advanced levels. These higher levels are required to manage highly complex projects, specialized TMs, and termbases. Within the scope of this presentation, only a limited selection of screens is shown.

The Translation Manager has access to a dashboard that displays either all current translation orders or only the orders assigned to that specific manager.

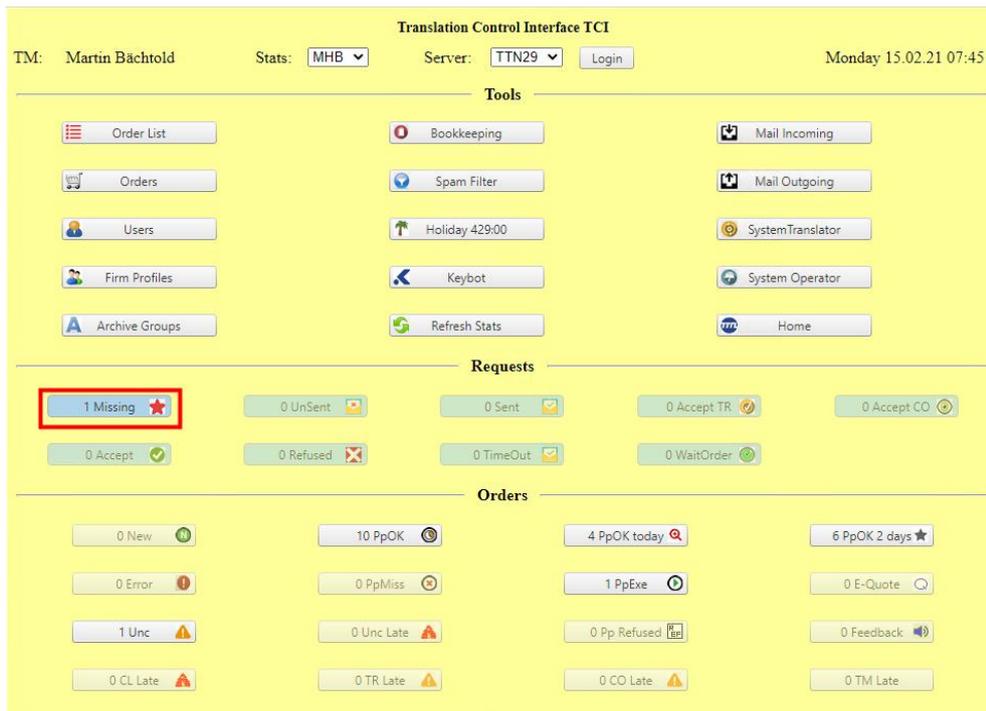


Figure 41: Translation Managers main dashboard

The Translation Manager dashboard displays only the most essential information about active translation projects, ensuring a clear and focused overview of ongoing activities. In the example above, a single request is highlighted because no translator has been assigned, immediately drawing the manager's attention to a critical issue.

Most dashboard panels appear only when an issue requires attention, ensuring that the Translation Manager is not burdened with superfluous or irrelevant information. The system automatically refreshes all displayed data every minute, providing real-time updates for timely monitoring and intervention.

The system displays incoming emails, overdue orders and order confirmations, as well as unread messages, while enabling comprehensive control and monitoring of the entire workflow.

No	St	Trg	Src	Trg	Deadline	Day	Fi	Chars	User	Firm	Order Name	%	PB	Price €	In Date
75140	📧	🇩🇪	🇩🇪	🇩🇪	29.10.25 11:30	We	2	18 414	Grieder Petra	Carrosserie suisse	20250731 Organisation	0	📧	1'940	23.10.25 16:38
75163	📧	🇩🇪	🇩🇪	🇩🇪	29.10.25 16:30	We	1	6 627	Marketing_Marketing	Carrosserie suisse	20251027_komm_nl oktober	0	📧	349	27.10.25 08:33
75175	📧	🇩🇪	🇩🇪	🇩🇪	29.10.25 17:15	We	1	2 206	Stangl Michael	OPO_Qeschger AG	Special FridayNov 2025 Profitieren Sie	0	📧	259	28.10.25 13:55
75176	📧	🇩🇪	🇩🇪	🇩🇪	29.10.25 18:00	We	3	2 496	Pascal Sarah	Centrale de Compensation CdC	ZNET-DMVFAF_TR_05988	0	📧	131	28.10.25 14:01
75171	📧	🇩🇪	🇩🇪	🇩🇪	29.10.25 22:00	We	4	5 504	Pascal Sarah	Centrale de Compensation CdC	ZNET-DMUKBB_TR_05987	0	📧	289	28.10.25 08:26
75173	📧	🇩🇪	🇩🇪	🇩🇪	30.10.25 10:30	Th	1	2 054	Ritter Chiara	OPO_Qeschger AG	SIMONSWERK_Blogbeitrag	0	📧	241	28.10.25 10:25
75083	📧	🇩🇪	🇩🇪	🇩🇪	30.10.25 12:00	Th	3	133 171	Dorsa Luca	Eid_Hochsch für Berufsbildung	WTO Ausschreibung CAMS Software - 250.01.df (V3)	0	📧	4'485	16.10.25 00:13
75180	📧	🇩🇪	🇩🇪	🇩🇪	30.10.25 14:00	Th	2	6 213	Netsch Carla	MeteoSchweiz	MM-Klimaszenarien-CH2025-DE_final	0	📧	384	28.10.25 17:39
75182	📧	🇩🇪	🇩🇪	🇩🇪	30.10.25 23:00	Th	2	5 866	Dorsa Luca	Eid_Hochsch für Berufsbildung	Grafiken_75083_extracted	0	📧	0	28.10.25 19:02
75081	📧	🇩🇪	🇩🇪	🇩🇪	02.11.25 23:00	Fr	9	102 760	Dorsa Luca	Eid_Hochsch für Berufsbildung	WTO-Ausschreibung Moodle 319.01.df	0	📧	3'416	15.10.25 15:13
75007	📧	🇩🇪	🇩🇪	🇩🇪	03.11.25 17:00	Mo	6	93 214	Uvek Clm	UVEK	CLM-J00048532	0	📧	3'627	29.09.25 17:37
75172	📧	🇩🇪	🇩🇪	🇩🇪	04.11.25 18:00	Tu	6	8 991	Uvek Clm	UVEK	CLM-J00049613	0	📧	259	28.10.25 09:44
75087	📧	🇩🇪	🇩🇪	🇩🇪	05.11.25 08:00	We	1	16 800	Minitender Noreply	Eidg_Finanzdepartement	484002727	0	📧	475	17.10.25 15:49
75101	📧	🇩🇪	🇩🇪	🇩🇪	10.11.25 09:00	We	1	31 200	Minitender Noreply	Eidg_Finanzdepartement	484002733	0	📧	867	21.10.25 13:39

Figure 42: Order list with clearly recognisable icons

There are several order lists for unconfirmed, overdue, and current orders. The red orders are due today, the blue orders tomorrow.

Individual orders can be accessed through the main order panel, which shows all order-relevant information. TTN TMS workflow is state-driven. The state of each order is shown on the main panel, and as soon as translators and proofreaders have confirmed or executed all files of a given order, the state is changed automatically.

The screenshot displays the TTN TMS interface for an order overview. The top navigation bar includes 'Home', 'Back', 'Up', 'Stack', 'Invoices', and 'Credit Notes'. The main content area shows order details for project 1_64641, including title, count, price, and deadline. A table lists assigned translators and their confirmation deadlines. Below this, a table shows routing cards for the file 'SLF202105031608_snowweather.html'. At the bottom, an email log shows outgoing messages to translators and proofreaders.

Role	Lang	Cnf	Free	Day	Deadline	D-	D+	H-	H+	Messages	Upload	Del
Derrick Martin	Translations		00:36	Mo	03.05.2021 17:00							
Teller Léon			00:36	Mo	03.05.2021 17:00							
Bertocchi Andrea	Traduzioni		00:17	Mo	03.05.2021 17:00							

RI	Lng	Status	Deadline	User	No	Your File Name	Up	Dn	PriceBase
	FR	PpOk	03.05.2021 17:00	Teller Léon	4	1_64641_1_4_FRE.html			CatCr
	FR	PpOk	03.05.2021 17:00	Stucki Thomas	1	SLF202105031608_snowweather_FRE.html			OgCr

Select	State	A	To	From	Add Date	Size	Typ	Subject		
Select	Sent		lwp@slf.ch	ttn@ttn.ch	03.05.21 16:11		Out_Order_Confirmation_to_CL	Auftragsbestätigung: SLF202105031608_snowweather		
Select	Sent		00393494558865@msg.eCall.ch	ttn@ttn.ch	03.05.21 16:11		Out_SMS	TTN Auftrag 64641 Zeichen: 3 199 Bestätigen bis: 03.05.21 16:30 Lieferfrist: 03.05.21 17:00 Kunde: WSL-SLF		
Select	Sent	2	andrea.bertocchi@alice.it	ttn@ttn.ch	03.05.21 16:11	0,07	Out_Order_to_TR	Übersetzungsauftrag 1_64641 für den 03.05 17:00		
Select	Sent		0032495562150@msg.eCall.ch	ttn@ttn.ch	03.05.21 16:10		Out_SMS	TTN Commande 64641 caractères: 3 199 Confirmer jusqu'à: 03.05.21 16:30 Délai de livraison: 03.05.21 17:00 Client: WSL-SLF		
Select	Sent	2	fa452796@skynet.be	tellerleon	ttn@ttn.ch	03.05.21 16:10	0,06	Out_Order_to_TR	Commande de traduction 1_64641 pour le 03.05 17:00	
Select	Sent		00447961886236@msg.eCall.ch	ttn@ttn.ch	03.05.21 16:10		Out_SMS	TTN Auftrag 64641 Zeichen: 3 199 Bestätigen bis: 03.05.21 16:30 Lieferfrist: 03.05.21 17:00 Kunde: WSL-SLF		

Figure 43: Order overview

An order can contain an unlimited number of files and target languages, but it always has a single source language. If an assignment involves two or more source languages, the system automatically splits it into several sub-orders.

The order overview displays the client information, deadline, volume, assigned translators and proofreaders, confirmation deadlines, and other relevant details. It provides a wide range of tools and numerous predefined emails. With a single click, the Translation Manager can send a message to all users involved in the project, or specifically to translators or proofreaders. The system is linked to Outlook and supports communication via email, SMS, or WhatsApp in various configurations.

Deadlines are calculated automatically and optimized to ensure the most efficient execution of the translation. The deadline calculation algorithm takes working hours and current workload into account.

The system also collects all order-relevant incoming and outgoing messages, comments, notes, instructions, QA reports, and AI analyses. It manages special types of information, documentation files, previous versions of the translation, and much more.

Confirm and Upload Deadlines

Role	Lang	Cnf	Free	Day	Deadline	D-	D+	H-	H+	Messages	Upload	Del
	Germany	Dursun.Nevzat	<input type="checkbox"/>	02:55	06.11.2025 10:00							
	Germany	Lambertz.Georg	<input type="checkbox"/>	02:03	06.11.2025 11:30							

1) ZNET-DN4BVH_TR_06011.pdf

ZNET-DN4BVH_TR_06011 pdf 3 523 Pages: 1 Chars: 2 832 Words: 354 CHF

Routing Cards for file: 1) ZNET-DN4BVH_TR_06011.pdf

RI	Lng	St	Status	Deadline	User	No	Your File Name	Up	Dn	PriceBase	%	TrgCnt	WrdCnt
	Germany		PpOk	06.11.2025 10:00	Dursun.Nevzat	8	1_75260_1_8_GFR.docx			TrCnt	0	0	0
	Germany		PpRes	06.11.2025 11:30	Lambertz.Georg	9	1_75260_1_9_GFR.docx			Time	0	0	0
	Germany		PpOk	06.11.2025 12:00	Pascal.Sarah	1	ZNET-DN4BVH_06011_GFR.docx			WrdTrCnt	0	0	354

Documentation

No	Typ	Status	File Name	Ext	Lang	Chars	Bytes	Add Date	Up	Dn	Copy	Del
2	Agreement_TR	Missing	1_75260_TR_Confidentiality_Agreement	.docx				05.11.25 11:11				
3	Agreement_CO	Missing	1_75260_CO_Confidentiality_Agreement	.docx				05.11.25 11:11				

Figure 44: Confidentiality agreements

The system generates confidentiality agreements and lists AI-translated files, performs PDF-to-Word conversions, identifies files requiring updates, and provides both client and Translation Manager instructions, along with various other specialised information items attached to each order. The Translation Manager can open XLIFF files directly in the online editor, view them as HTML files, or access them in their native format, ensuring maximum flexibility and control during project management.

CAT Projects

Reset PAK & SHR Reset PAK Reset SHR Cancel Creation Delete Delete => Create

Order Number: 1_75244 Order Name: SIF202511041246_snowweather Translation Type: MT Full
 Source Language: Germany Create Status: Created Translation Provider: DeepL_Trados

ProjectName	Translated	%	Type	Role	Trg	TP	Provider	Chars	Words	Segs	Savings	Deadline TR	User Settings TR	Deadline CO	User Settings CO	Exists			
1_75244_FRE_SDL_SHR_TR	Yes	62			FR	FR	DeepL_Trados	472	91	12	31.1%	04.11.25 14:45	Teller Léon			Yes			
1_75244_FRE_SDL_PAK_TR	Yes	62			FR	FR	DeepL_Trados	472	91	12	31.1%	04.11.25 14:45	Teller Léon			Yes			
1_75244_ITA_SDL_SHR_TR	Yes	62			IT	IT	DeepL_Trados	452	87	12	34.0%	04.11.25 14:45	Gallorini Stefano			Yes			
1_75244_ITA_SDL_PAK_TR	Yes	62			IT	IT	DeepL_Trados	452	87	12	34.0%	04.11.25 14:45	Gallorini Stefano			Yes			
1_75244_GBE_SDL_SHR_TR	Yes	62			GB	GB	DeepL_Trados	472	91	12	31.1%	04.11.25 14:45	Clarke Paul			Yes			
1_75244_GBE_SDL_PAK_TR	Yes	62			GB	GB	DeepL_Trados	472	91	12	31.1%	04.11.25 14:45	Clarke Paul			Yes			

Figure 45: List of CAT projects

The CAT projects are generated automatically, and the translation manager can supervise and access each project individually.

SDL Trados Project: 1_75244_GBE_SDL_SHR_TR SIF202511041246_snowheat

URL: [Open Project 1_75244_GBE_SDL_SHR_TR in Studio](#)
 Filerstore Dir: \\TND4ITN34_DBISDL\SDLServer\Filerstore\4656c44-2854-4623-820b-49990462a2b0
 Local Project Dir: \\SIF17H27_DBISDL\CaLocal\Projects\1_75244_GBE_SDL_SHR_TR
 Qualified Name: \\SIF17_75244_GBE_SDL_SHR_TR
 Translator: Clarke Paul

Order Date: 04.11.2025 13:47 User: Shudi Thomas Firm: WSL-SLF
 Status: Sent/CI Deadline: Tuesday 4 November 2025 14:45 Order sent: Tuesday 4 November 2025 14:27 Checked out: True (PP is NOT working)
 ReasonCode: 491 ProjectStatus: Archived
 Date created: 04.11.2025 13:50

Log

Translation Memories

Name	Type	Src	Trg	Description	Entries	Created	Computed
ITN_SLF_deGB_enGB		Germany	Germany	WSL Institute for Snow and Avalanche Research SLF	10 571	08.10.2025	01.01.2000

TermBases

Name	CAT	Type	Description	Archive Group	Languages	Concepts	Terms	Created
ITN_SLF_de_en_fr_it		SDL	SLE		4	193	940	08.10.2025
ITN_SLF_de_en		SDL	SLE		2	10	23	08.10.2025
ITN_SLF_Satcatstatus		SDL	SLE		4	2 637	10 945	08.10.2025

Files in Local Project Target Directory en-GB

Filename	Seg_Src	Seg_Trg	%	PR_LastWriteTime	FileSize
1_75244_1_8.html.sdliff	13	8	62	04.11.25 14:24	23 389

Files in Server Filerstore and in Table File

Filename	Field	Seg_Src	Seg_Trg	%	PR_LastWriteTime	FileSize	VersionNo	LastVersion
1_75244_1_8.html.sdliff		13	8	62	04.11.25 13:50	19 566	4	Yes
1_75244_1_8.html.sdliff	1099	13	8	62	04.11.25 13:50	19 566	3	No
1_75244_1_8.html	1097	0	0	0	04.11.25 13:50	2 866	1	No
1_75244_1_8.html.sdliff	1098	12	0	0	04.11.25 13:50	13 652	2	Yes

Open with Online Editor

RI	Lang	Status	User	No	Your File Name
	Germany		Clarke Paul	6	1_75244_1_8_GBE.html

Entries in Table ProjectFile

ProjectField	OriginalName	ProjectFieldRole	PendingCheckIn	FileOperationId	LastModified
316	1_75244_1_6.html	Translatable	False		04.11.2025 12:50:35

Entries in Table LanguageFile

LanguageField	ProjectField	LanguageDirectionId	AnalysisStatisticId	SettingsBundleId	PendingCheckIn	FileOperationId	LastModified
548	316	0	0	0	False	-1	04.11.2025 12:50:35
549	316	180	233	0	False	-1	04.11.2025 12:50:35

Entries in Table FileOperation

FileOperationId	ProjectId	FileOperationType
No records to display.		

Figure 46: CAT projects on the GroupShare server

TTN TMS can directly access the resources of each project by reading data from the Trados GroupShare filestore and database. In practice, this means that all versions of project files are tracked, listed, and immediately accessible for viewing or download whenever needed. This integration with GroupShare ensures full visibility of every file version and project asset, providing a comprehensive and up-to-date overview of all project resources.

The tools for accessing file versions and project data are generally not needed in everyday business operations. They are primarily intended for diagnostic purposes and error tracking. In case any issues arise during a project, these tools allow project managers and support teams to trace all steps and changes, offering full transparency of the workflow. Every process can be followed and audited, which is invaluable for troubleshooting and ensuring that the translation workflow remains clear and accountable.

The TTN TMS module follows a non-deletion policy for project files. Instead of permanently deleting files, TTN TMS simply marks files as “deleted” in the system. This means that no file is ever truly lost – a file marked as deleted can be recovered at any time by the translation manager. This soft-delete approach safeguards against accidental data loss and allows easy recovery of files whenever necessary, ensuring that valuable translation work and file history remain intact for future reference or rollback.

One of the most important tasks of the Translation Manager is order assignment to Translators and proofreaders. There are two systems.

7.2 Manual Selection of a Dedicated Translation Team

TTN TMS uses client or client group profiles to assign translators and proofreaders to an order or a client account.

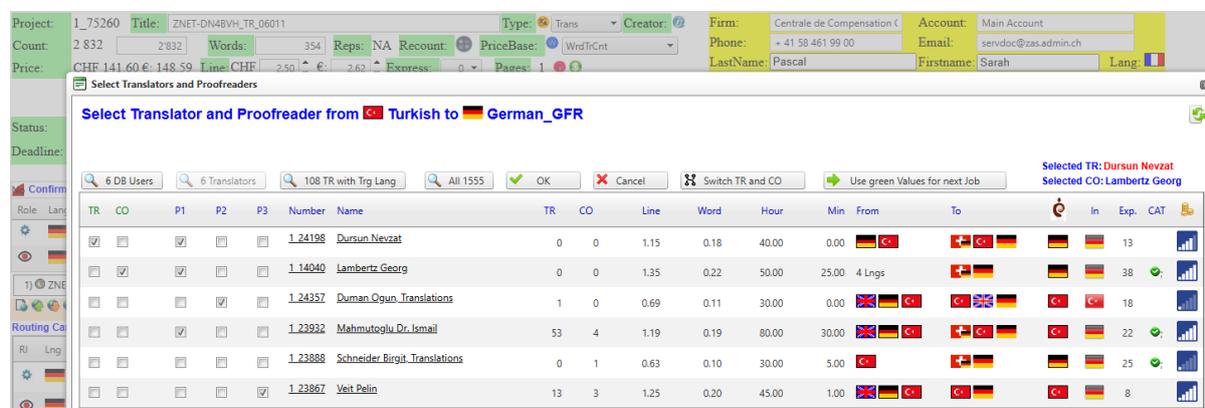


Figure 47: Manual order assignment

When a new client or a member of a client group requests translations for a specific language pair, the Translation Manager assigns a dedicated translator and proofreader team to that client. This usually involves selecting a primary translator and a primary proofreader who will handle the client’s projects in that language combination. The rationale is to maintain consistency and quality: when the same small team of linguists works on all content for a client, they become deeply familiar with the client’s preferred terminology and style, resulting in more uniform translations. Team members can also be given different priority levels – for example, one translator is marked as first priority (primary), and another as second priority (backup) – to ensure there is always a qualified person available for the work.

Once the translator–proofreader team has been established for the client, the system will consistently propose the same primary translator for all subsequent jobs from that client. This practice helps preserve a consistent tone and terminology across all the client’s projects, as the translator builds up specific knowledge of the client’s content and preferences. However, real-world constraints like workload and availability are taken into account through the priority system. If the primary translator is overloaded with work or explicitly refuses a new job, the system will automatically select the next available translator – i.e. the translator with the second-highest priority for that client’s language pair – to take on the project. In other words, the backup translator steps in if the first-choice translator is unavailable. This automatic fallback mechanism ensures that projects can continue without delay even when the preferred linguist can’t take on a task.

The proofreader selection works in tandem with the translator assignment. Typically, the assigned proofreader remains the same for consistency, and a similar priority ranking can be used for proofreaders. This way, if the primary proofreader is unavailable, a secondary proofreader can be engaged to review the translations. By maintaining a stable translator–proofreader team with defined backups, the Translation Manager ensures both continuity and reliability in the workflow.

7.3 Autopilot Mode and Automatic Assignment

If the Autopilot feature is activated for the project, the system will handle the assignment process automatically, without the Translation Manager’s intervention. Autopilot mode in a translation management system means that the software itself selects the appropriate translator and proofreader based on the predefined team and their priority, and then forwards the project to them *hands-free*. In practice, the platform will evaluate the language pair requested and automatically assign the job to the highest-priority available translator and proofreader for that client. It will typically send out notifications or job invitations to those linguists instantly. All of this happens without any manual steps – the Translation Manager does not need to contact translators or push any buttons once Autopilot is running. The project files and details are routed to the selected translator and proofreader automatically, and the work can begin right away.

Behind the scenes, Autopilot uses the rules set up by the manager. For example, if the primary translator is at capacity or unavailable, the system will immediately move to the secondary option on its own. The entire workflow can be executed without human intervention, apart from the linguists doing the translation and proofreading work. The Translation Manager only needs to oversee the process at a high level, rather than assigning each task.

Notably, if Autopilot is on and a translator doesn’t accept or respond to an assignment, the system can automatically proceed to the next available linguist. For instance, the automation will invite the top-choice linguist first, and if they decline or time out, it will then invite the next set of linguists in line until someone accepts. This ensures that even with Autopilot, the backup priorities are respected and the project isn’t stuck waiting on one person. Finally, once the translator and subsequently the proofreader complete their tasks, the system can even forward the completed translation back to the client or mark the project as done with minimal manager involvement, depending on how the workflow is configured.

7.4 Benefits of Using Priority Teams and Autopilot

Implementing a priority-based team assignment together with an Autopilot workflow offers several benefits:

- **Consistency in Quality:** Keeping the same translator for a client’s projects leads to more consistent translations, as the translator is familiar with the client’s terminology and style guide. The proofreader likewise ensures the same quality standards are applied across jobs. This consistency strengthens the client’s trust in the translation service.
- **Efficiency and Speed:** The system’s automatic fallback to a second-priority translator when the first is unavailable means projects don’t get held up waiting for one specific person. Work can commence with the backup without managerial delay. Autopilot further accelerates the process by removing the need for manual assignment – jobs are created and dispatched to linguists immediately when a request comes in. This immediacy can shorten turnaround times significantly.
- **Reduced Managerial Workload:** With Autopilot handling routine assignments, the Translation Manager can focus on oversight and exception handling rather than every single task assignment. The mundane steps (creating jobs, selecting translators, sending files) are automated, which cuts down on administrative overhead. Fewer manual hand-offs also reduce the chance of human error in assigning the wrong person or missing a request.
- **Reliability and Scalability:** A priority system with designated backups makes the translation process more resilient. Even if the volume of work increases or if multiple translators are at capacity, the system can scale by tapping into the next available qualified linguists in the priority list. This is especially useful for large projects or when managing many clients – the combination of a structured team lineup and automation allows the operation to handle growth without sacrificing response time or quality. In essence, the workflow is “always on” – new translation jobs trigger the system to find the right team members and start the work, maintaining throughput even at high volumes.

In summary, the Translation Manager’s ability to assign a translator/proofreader team with set priorities ensures each client gets a dedicated team for consistency, with backups ready to maintain continuity. And when Autopilot is enabled, the entire assignment and delivery pipeline runs automatically – selecting translators, inviting them to the job, and forwarding projects – all without the manager’s direct input, unless intervention is needed. This blend of human expertise (through dedicated teams) and automation (through Autopilot) leads to a more efficient, reliable, and scalable translation service workflow.

RI	Src	Trg	Translator or Proofer	Prio	Take	Forward	Dispatch	Del	
		German	English GB	Clarke Paul	1	Must	Auto	Auto	
		German	French	Teller Léon	1	Must	Auto	Auto	
		German	Italian	Bertocchi Andrea, Traduzioni	1	Must	Auto	Auto	

Figure 48: Parameters for autopiloted workflow

Some clients prefer to have the same translators and proofreaders handle all their projects to ensure continuity. In the example profile, the client has chosen to work exclusively with a fixed team for all translations. This approach means the designated linguists become deeply familiar with the client's terminology, style, and preferences over time, leading to improved consistency and quality in the translations. By consistently pairing the client with the same translator (and reviewer), the workflow builds a strong understanding of the client's content, rather than assigning projects arbitrarily to any available linguist.

To enforce the use of the same team, the system's assignment setting called "Take" is configured to "Must." This Must setting indicates that the primary chosen translator is required to take each incoming job for that client's projects. If the preferred translator is unavailable or declines the task, the automated workflow will halt instead of automatically moving on to another translator. In other words, the translation request will not be reassigned to a different person without intervention – it stops and flags the Translation Manager, rather than violating the client's preference for that specific translator. This strict parameter ensures the client's exclusivity request is honored, albeit at the risk of delays if the particular translator cannot accept a job.

7.5 Automated Workflow Sequence

With the profile configured this way, the translation management system runs on autopilot for the entire process. The key steps in this autopiloted workflow are:

1. **Automatic Assignment to Translator:** Whenever a new translation order comes in from the client, the system automatically forwards it to the pre-selected translator designated for that client. (Because the 'Take' option is *Must*, if this translator is not available to take the job, the process does not auto-assign to anyone else – it will pause for manual handling.)
2. **Handover to proofreader:** Once the translator accepts and completes the translation, the system immediately routes the job to the assigned proofreader for review without any manual step needed. The proofreader is predetermined as part of the client's fixed team, ensuring the review is also handled by the familiar linguist.
3. **Automatic Delivery to Client:** After the proofreader finishes the review and approves the work, the final translated document is delivered directly to the client. The system sends the completed translation back through the client portal or via email automatically, with no intervention by the Translation Manager required in this entire cycle.

This autopiloted workflow configuration streamlines the project flow while maintaining a consistent team for the client. All tasks – assignment, progression to next step, and delivery – occur seamlessly in the background. The Translation Manager does not need to manually oversee each stage, provided the designated linguists are available and accept the tasks. By leveraging the same trusted translator-proofreader duo for every project, the client gains in consistency and the team's productivity often improves as they become increasingly knowledgeable about the client's content and expectations. The trade-off of the strict *Must* setting is that if the chosen translator cannot take a job at a given time, the job will wait for attention rather than being reassigned automatically, thus preserving quality and familiarity at the potential cost of speed.

7.6 Automatic Order Assignment by Time-Delayed Requests

Some clients require translations in a very large number of language combinations—sometimes up to 200, including many rare or less common pairs. In such cases, it is unrealistic for the Translation Manager to know the strengths, specializations, and availability of every translator. To address this, the system uses an AI-driven assignment mechanism for translators and proofreaders. All qualified linguists for each language pair are grouped into a dedicated pool, which the AI consults to assign new orders to the most suitable and available translator.

RI	Src	Trg	Translator or Proofer	Prio	Take	Forward	Dispatch	Del
			Dallinesi Brunilda	1	Next	Auto	Auto	
			Ribaldo Marie Claire	1	Next		Manu	
			Hanisch Claudia	1	Next	Manu	Manu	
			Lambertz Georg	1	Next		Manu	
			Falk Dr. Daniel					
			Deiri Armin Translations					
			Daham Yasin Translations					
			Bagarić Pitinac Silvija Translations	1	Next	Manu	Manu	
			Šitov Magdalena Andjelika	1	Next		Auto	
			Lafarges Albena					
			Rühner Martina Translations					
			Amien Alzbeta Translations	1	Next	Manu	Manu	
			Ribaldo Marie Claire	1	Next		Manu	
			Weinberg Richard Translations	1	Next	Manu	Manu	
			Narita Monika	1	Next		Auto	
			Laux Martina					
			Fröhlich Steffy Translations					
			Van Kampen Arie Translations					
			Mazelin Marie Claire					
			Lognoul Philippe Translations					
			Jünemann Saskia	1	Next	Manu	Auto	
			Lambertz Georg	1	Next		Manu	
			Winter Etter Ruth Translations					
			Müller Johannes Translations					
			Fenske Gerlinde					

Figure 49: Translator and proofreader pool for each language combination

For example, the Central Compensation Office (CCO) in Geneva has, in recent years, requested translations in more than 150 language combinations. To manage this volume and diversity, the system maintains a pool of over 500 specialized medical translators. When a new order arrives from such a client, the system automatically broadcasts a translation request to the relevant pool via multiple channels—WhatsApp, SMS, email, and the mobile platform. The highest-ranked and most suitable translator or proofreader, as determined by the AI algorithm, receives the request immediately, ensuring that the best-qualified expert has the first opportunity to accept the job.

Run the translator pool: 'Good' translators are informed earlier than 'bad' translators.

The screenshot displays a project overview at the top with fields for Project (1_63919), Title (ZNET-BXWCRH), Type (RF Trans), Creator, Firm (Centrale de Compensation), Account (Main Account), Count (2 320), Words (357), PriceBase (Word), Price (CHF 142.80 € 119.00), and Line Express (0). A red arrow points to the Deadline field (18.02.2021 12:00) with the annotation: "The deadlines are calculated automatically based on the information from the ZAS and the number of words." Below this is a routing card table with columns: Ri, Lng, Status, User, MobilPhone, Send Delay, RS, R#, TR, CO, PriceBase, Line, Word. The first row is highlighted with a red box and an annotation: "Send delay calculated on secret formula: auto-optimising profit for all stake holders".

Ri	Lng	Status	User	MobilPhone	Send Delay	RS	R#	TR	CO	PriceBase	Line	Word
8	DE	UnSent	Pascal Sarah		Now	★	4.7/3	16	348	0.68	0.09	
8	DE	UnSent			Now	★	5.0/3	274	2	0.64	0.08	
8	DE	UnSent	Erbschlich Steffy Translations	0049 172 7 94 58 77	10 Min	★		0	0	1.00	0.13	
8	DE	UnSent	Hochreit Manuela Translations	+47 455 150 11	5 Min	★		9	0	0.92	0.12	
8	DE	UnSent	Leau Martine	+49 172 917 6789	20 Min	★		0	0	1.54	0.20	
8	DE	UnSent	Nerita Monica	+49 151 10133330	5 Min	★		4	1	0.92	0.12	
8	DE	UnSent	Strand Kirst	+49 170 4442494	20 Min	★		0	0	1.30	0.17	
8	DE	UnSent	Wenbers Richard Translations	+49 151 521 538 55	5 Min	★		1	0	0.92	0.12	

Figure 50: The most suitable translator gets the request immediately

The translator can accept the assignment directly through a convenient interface (for instance, by selecting an option in the WhatsApp menu or by replying to the SMS). If none of the first group of top-ranked translators accepts the request within five minutes, the system automatically escalates the request to the next set of qualified translators. This process is repeated in five-minute intervals, expanding to a broader pool each time until a translator accepts the job. This time-staged broadcasting strategy balances speed and quality: it gives the best translators a brief exclusive window to respond, thereby maximizing the chances of a high-quality translator taking the job, while still ensuring that the request is filled quickly by the wider pool if the top choices are unavailable.

Each translator in the pool is ranked by an AI algorithm that continuously learns and updates rankings based on up to ten performance metrics. These metrics include factors such as the feedback scores from proofreaders on previous projects, the number of jobs the translator has successfully completed, punctuality (e.g. instances of late deliveries), the translation manager's qualitative appraisal, the frequency and extent of revisions required by the proofreader, the time efficiency recorded by the proofreader during revisions, and other relevant performance indicators. By holistically evaluating these criteria, the AI is able to identify the most suitable translator for each new order, matching subject-matter expertise and reliability to the job's requirements.

7.7 Benefits of the AI-driven, time-delayed assignment approach

This automated assignment system has proven to be far more effective than manual assignment. Key advantages include:

- **Improved Translation Quality:** By always selecting the highest-rated available translator for the task, the system enhances overall quality. Each completed order provides more data to the AI, further refining the rankings. Over time, translation quality improves with each new order as the system becomes increasingly adept at matching jobs to the translators who handle them best.
- **Efficiency and Speed:** The moment an order is submitted, the top-ranked translator is notified instantly. In most cases, a suitable translator accepts the job within minutes, without

the delays of manual coordination. Even when the first-choice translators are unavailable, the iterative 5-minute request cycle ensures that another qualified linguist is found swiftly. This minimizes idle time and accelerates project start times, all while preserving a high standard of quality.

- **Optimal Resource Utilization:** The AI continuously monitors translator performance. If a particular translator's work starts to require unusually extensive proofreading or consistently falls short (for example, if their translations often need significant revisions or take a long time to review), their ranking will drop accordingly. This opens opportunities for other translators in the pool to step in and demonstrate superior performance. In this way, the system encourages healthy competition and continuous improvement among translators. High-performing translators are rewarded with more opportunities, whereas lower-performing ones receive fewer assignments until they improve, ensuring that clients get the best service possible.
- **Scalability and Manageability:** For translation managers, the AI-driven system greatly simplifies handling large and complex projects. Managing requests in 150+ language combinations with a pool of hundreds of translators would be overwhelming to do manually. The AI selection mechanism can scale to these demands effortlessly, tracking each translator's skills and history in ways a human manager cannot easily do. This results in better matches between translators and assignments (especially for specialized domains like medical translation in the CCO example) and significantly reduces the administrative burden.

In summary, the time-delayed AI assignment process ensures that each translation order is handled by the most qualified and reliable translator available, while maintaining quick turnaround times. It combines the intelligence of data-driven ranking with a sensible staged notification system. This approach not only improves translation quality and consistency but also increases efficiency in project workflow. The system's performance in practice has demonstrated markedly better outcomes than manual assignment, validating the use of AI for translator selection in large-scale and multi-language translation projects.

7.8 AI-Driven Mail Robot

In a modern translation management environment, an AI-driven "mail robot" acts as an intelligent email processing agent. It automates the handling of incoming translation requests via email, from recognizing standardized order formats to distributing tasks, with minimal manual intervention. By integrating natural language processing (NLP) and machine learning, this system ensures that *every* email – even those from outside digital platforms – is processed consistently, quickly, and transparently within the translation workflow.

Incoming Mail Search:

Basic
 Back, Delete, List Unread

Action
 Order, Quote, Attach, Body to Docx, Recount, Switch Excl/Incl, Refresh

Mail
 Forward, Reply Online, Register as Junk

Copy and Down
 Copy to MyWork, Copy to TmpTtn

Client
 New Client, Clone Client

Client with more than one account

Select	No	Account	Lastname	Firstname	Firm
<input checked="" type="checkbox"/>	23658	Übersetzungen	Galliker	Barbara	MeteoSchweiz
<input checked="" type="checkbox"/>	23674	Translations	Galliker	Barbara	MeteoSwiss
<input checked="" type="checkbox"/>	23612	Translation	Galliker	Barbara	MeteoSuisse

Attachments

Include	Client File Name	Ext1	Count	MB	flag	Language	Dn	De
<input checked="" type="checkbox"/>	Instructions	.docx	776	4		German		
<input checked="" type="checkbox"/>	Text_Factsheet_Infrastru	.docx	2727	15		French		
<input checked="" type="checkbox"/>	Factsheet-Automatisati	.docx	5814	18		French		
<input checked="" type="checkbox"/>	Documentation	Factsheet-Automatisier	11038	4.420		German		

Calendar
 September 2025
 17:00

Email Body
 Auftrag MeteoSchweiz/Abteilung Sprachkombination
 PKO
 F → Deutsch
 Titel
 Dokumententypen Word – Texte Factsheet (Pollenmessungen + Infrastruktur)
 Rechnungsadresse Adresse: MeteoSchweiz, o/o DLZ FI EFD, 3003 Bern
 MeteoSchweiz Referenznummer Rechnung: REF-1012-10455 / Kostenstelle 805 000 / PDF-Rechnung@efv.admin.ch
 Zielpublikum Öffentlichkeit
 Hilfen
 Anmerkungen
 Gewünschter Abgabetermin 17.09.2025 – 17:00

Figure 51: Mail robot interprets the mail contents

One of the mail robot's core functions is recognizing a wide range of standardized email formats used by clients to request translations. The system leverages structured email parsing techniques to identify key information in these emails based on predefined patterns or templates. For example, if a client uses a fixed email template for orders (with fields like source language, target language, deadline, word count, etc.), the AI will detect those fields automatically. Once an email order is detected, the content is automatically converted into a structured TTN TMS order record. This means the email's unstructured text is transformed into a formal job entry without any manual data entry. In essence, the mail robot acts like an email parser that extracts crucial details (project name, languages, requested delivery date, attachments, etc.) from the incoming message.

Schweizerische Eidgenossenschaft
 Confédération suisse
 Confederazione Svizzera
 Confederaziun svizra

Demande de traduction

Madame, Monsieur.

Nous avons le plaisir de vous soumettre une demande de traduction. Conformément au cahier des charges, vous devez **accepter** ou **refuser** le mandat en répondant impérativement à ce mail dans un délai de 1 heure après l'envoi.

En cas d'acceptation de la commande, nous vous prions d'accuser réception de celle-ci dans l'heure qui suit l'envoi. L'accusé de réception doit contenir une confirmation du délai de réalisation de la traduction ainsi que les noms du traducteur et du réviseur amenés à exécuter la traduction (voir ch. 5.3.1 du contrat-cadre).

Détail de la demande

No. Mandat : ZNET-0N4BL3
 Langue source : Slovaque
 Langue cible : Allemand
 Nombre de mots estimés (langue source) : 618 mots
 Délais (calculé selon le nombre de mots estimés) : 1 jour(s)
 Urgent : Non
 Date / Heure de l'envoi : 04.11.2025 15:11:57
 Remarques

Dans l'attente de votre réponse, nous vous adressons nos cordiales salutations.

Secrétariat de la Logistique

Figure 52: Standardised mail orders are automatically converted in system order

By converting email requests into the structured workflow, the AI-driven mail robot fully integrates non-digital workflows into the automated translation process. In the past, if a client sent a translation request via plain email (outside of a portal or management system), project managers would have to manually create an order in the system. Now, the mail robot bridges that gap automatically. Even if a request comes in as a free-form email, the system can interpret it and bring it into the digital fold. This maintains consistency across all incoming orders – every job, whether submitted through a web portal or email, follows the same standardized process. It also improves speed, as the time from client email to having a job created and assigned is drastically reduced. Moreover, it enhances traceability, since every email order is logged and tracked in the system. There is a clear audit trail from the original email content to the created order and all subsequent actions.

Beyond processing orders, the mail robot also intelligently responds to certain emails automatically using its NLP capabilities. It can understand the content and intent of incoming messages to determine if an automated reply is appropriate.

The AI-driven mail robot not only creates new orders from incoming emails, but it also excels at associating emails with existing projects when applicable. Often, clients or translators will send follow-up emails that reference an order number or project code in the subject or body. The mail robot scans incoming messages for any known order identifiers and, if found, automatically links that email to the corresponding project record in the TTN system.

Given the volume of emails any organisation receives, the mail robot also incorporates a sophisticated spam filter and relevance detector. It uses AI to distinguish between legitimate, relevant emails and unsolicited or irrelevant messages. Traditional email filters might only use rule-based checks or look at sender reputations, but our AI-driven system goes further by analysing the content and context of each incoming email. For example, if an email is a mass marketing newsletter or a random solicitation not related to any translation work, the system will flag or quarantine it so that it doesn't bother the translation managers.

In summary, the AI-driven mail robot enhances the translation management workflow by automating email-based requests and communications with intelligence and precision. It recognizes and processes standard email orders into the system, replies to routine inquiries, intelligently routes messages to the right people, links correspondence to the correct projects, and filters out noise. All these capabilities work together to maintain a high level of consistency, accelerate turnaround times, and provide end-to-end traceability of translation projects. The translation team can handle higher volumes of work more efficiently, and clients receive swift, accurate service.

7.9 Automatic Feedback with Track Change

When the proofreader uploads or checks in the reviewed files, the system automatically compares them with the original files sent by the translator. Using the Track Changes feature, it highlights all modifications made during the review. The system then sends the annotated files back to the translator via email and also publishes them in the translator's account for reference.

Trg	Fig	Language	St	Typ	Dn	No	Lang	RV	RVL	LVS	LVS%	Jac	Bleu	Cos	File Name	Del
<input type="checkbox"/>		French						10	121	0.05	32.00	99.90	1.00	1.00	1_75086_1_4_TR_vs_CO_ITA_Compared.docx	
<input type="checkbox"/>		Italian						11	120	0.05	567.00	98.38	0.99	1.00	1_75086_1_5_CO_vs_CL_FRE_Compared.docx	
<input type="checkbox"/>		French						10	186	0.10	92.00	99.72	1.00	1.00	1_75086_2_4_TR_vs_CO_ITA_Compared.docx	
<input type="checkbox"/>		French						11	139	0.07	601.00	98.27	0.98	1.00	1_75086_2_3_TR_vs_CL_FRE_Compared.docx	
<input type="checkbox"/>		French						12	204	0.11	601.00	98.16	1.00	1.00	1_75086_2_4_TR_vs_CL_ITA_Compared.docx	
<input type="checkbox"/>		French						13	107	0.06	601.00	98.27	0.98	1.00	1_75086_2_5_CO_vs_CL_FRE_Compared.docx	
<input type="checkbox"/>		French						10	140	0.12	45.00	99.84	1.00	1.00	1_75086_3_4_TR_vs_CO_ITA_Compared.docx	
<input type="checkbox"/>		French						11	80	0.06	1'600.00	94.77	0.99	1.00	1_75086_3_3_TR_vs_CL_FRE_Compared.docx	
<input type="checkbox"/>		French						12	158	0.14	581.00	97.95	0.99	1.00	1_75086_3_4_TR_vs_CL_ITA_Compared.docx	
<input type="checkbox"/>		French						13	68	0.06	1'599.00	94.77	0.99	1.00	1_75086_3_5_CO_vs_CL_FRE_Compared.docx	

Select	State	A	To	From	Add Date	Size	Typ	Subject	
<input type="checkbox"/>	Sent	1	andreabertocchi@alice.it, bertocchi.trad@gmail.com	ttn@ttn.ch	24.10.25 00:10	0.60	Out_Compare_Files	Korrigierte Datei 1 75086 Nachübersetzungen Bildungspläne (Update)	
<input type="checkbox"/>	Sent	1	andreabertocchi@alice.it, bertocchi.trad@gmail.com	ttn@ttn.ch	23.10.25 23:10	0.56	Out_Compare_Files	Korrigierte Datei 1 75086 Nachübersetzungen Bildungspläne (Update)	
<input type="checkbox"/>	Sent	1	andreabertocchi@alice.it, bertocchi.trad@gmail.com	ttn@ttn.ch	23.10.25 23:10	0.54	Out_Compare_Files	Korrigierte Datei 1 75086 Nachübersetzungen Bildungspläne (Update)	
<input type="checkbox"/>	Sent	1	mc.ribaudo@gmail.com	ttn@ttn.ch	22.10.25 10:10	0.56	Out_Compare_Files	Fichier corrigé 1 75086 Nachübersetzungen Bildungspläne (Update)	
<input type="checkbox"/>	Sent	1	mc.ribaudo@gmail.com	ttn@ttn.ch	22.10.25 10:10	0.60	Out_Compare_Files	Fichier corrigé 1 75086 Nachübersetzungen Bildungspläne (Update)	
<input type="checkbox"/>	Sent	1	mc.ribaudo@gmail.com	ttn@ttn.ch	22.10.25 09:10	0.54	Out_Compare_Files	Fichier corrigé 1 75086 Nachübersetzungen Bildungspläne (Update)	

1_75086_3_5_CO_vs_CL_FRE_Compared.docx Revisions: 68 Per Line: 0.06

OFEV — Office fédéral de l'environnement

Figure 53: Automatically generated feedback files

The system calculates useful comparison metrics for each reviewed file. These include the number of revisions made, the *Levenshtein distance* (edit distance between the original and revised text), the *BLEU score* (an automatic translation quality score), as well as other metrics to quantify the differences. This provides an objective overview of how much the translation was altered during proofreading.

Le véhicule est en règle générale monté sur un pont-élévateur lift pour contrôler et entretenir les composants accessibles par le dessous du véhicule. Ce faisant, on procède en suivant les check-lists du constructeur automobile ou les instructions des fournisseurs indépendants des constructeurs. Ces travaux sont définis avec précision en termes de manière de procéder, d'outils, de matériaux et de supports. Ils comprennent le contrôle et le changement des produits de fonctionnement et auxiliaires et des filtres ainsi que le contrôle et la maintenance du système de freinage sur instruction et de l'arbre moteur et à cardan. Les amortisseurs sont par ailleurs contrôlés.

entretiennent et vérifient les arbres de transmission, les articulations et les arbres à cardan et roue

contrôlent les amortisseurs de vibrations, suspension, les ressorts, les composants et les points d'appui de la suspension

Selon la période de l'année, de très nombreux pneus et roues sont changés dans les garages. À cette occasion, il est très important de respecter aussi bien les directives des constructeurs relatives aux véhicules que les dispositions du trafic routier ce qui nécessite des actions et réflexions pluridisciplinaires. La plupart du temps, ces travaux sont effectués de manière autonome à l'aide de boulonneuses à chocs et de machines de montage et d'équilibrage des pneus sur des plateformes élévatoires-lifts. Ces travaux exigent une technique de travail rationnelle et une utilisation soignée des machines et de la clé dynamométrique. L'application minutieuse des connaissances théoriques sur les roues et les pneus ainsi que les aspects liés à l'efficacité énergétique et de consommation des carburants et à la gestion écologique des vieux matériaux accompagnent l'action décrite.

démontent et montent les disques de frein, les garnitures de frein, remettent les pistons de frein en position initiale, effectuent le réglage du frein de stationnement et appliquent les consignes de sécurité

effectuent des ordres d'atelier en suivant des instructions de travail et service

Figure 54: Track change in HTML and Word format

The feedback files with tracked changes can be viewed either as an HTML page or as a generated Word document, making it easy for translators to see exactly what was changed. All confirmed changes are also incorporated into the translation memory (TM) automatically. In this way, the system “learns” from the corrections with minimal manual effort.

7.10 Benefits of Automatic Feedback

TTN TMS provides an automatic feedback mechanism that compares reviewed files with the originals, highlights all changes, and feeds accepted corrections back into the translation memory. This capability delivers immediate, data-driven insight for translators and managers, strengthens consistency across projects, and supports continuous improvement with minimal administrative overhead. The principal benefits are set out below.

- **Immediate Visual Feedback for Translators:** All modifications are clearly highlighted, allowing translators to easily see and understand the corrections made by proofreaders. This helps translators learn from their mistakes and avoid repeating them in future assignments.
- **Quantitative Quality Metrics:** By computing statistics like the number of revisions, Levenshtein distance, and BLEU score, the system provides an objective measure of translation quality. Translators and project managers can use these metrics to gauge improvement over time and identify areas that may need additional training or attention.
- **Continuous Improvement via TM Integration:** Every accepted change is fed back into the Translation Memory. This ensures that future translations benefit from the improvements, increasing consistency and overall quality without extra effort. The organisation essentially becomes a self-improving “learning system,” as the TMS continually updates its knowledge base with each revision.
- **Performance Tracking and Quality Assurance:** The detailed statistics generated for each translator (e.g., how many changes their work needed) enable the organisation to track translator performance reliably. Management can identify high-quality translators or provide support where needed, using concrete data. This leads to better quality assurance and informed decisions when assigning tasks or evaluating translators.

With this automatic feedback mechanism in place, TTN TMS facilitates a cycle of continuous learning and quality improvement. It provides immediate, data-driven feedback to translators and updates the system’s knowledge base — all with virtually no manual overhead. This not only improves the quality of translations over time but also gives the organisation clear insights into the performance and progress of its translation team.

7.11 TTN Counter: Direct Access to Office Applications

The Translation Control Interface is accessible through any web browser with no extra installation, making it convenient for Translation Managers to oversee projects from anywhere. However, working purely via browser has a limitation: Office documents (like Word files) cannot be opened and edited in-place. Normally, to make changes, a manager must download the file, edit it, and then upload it back, which is cumbersome and prone to version errors. There is a workaround using a virtual desktop environment, where a more elegant solution is available through a dedicated add-on application called TTN Counter. TTN Counter was initially designed to count words in various file formats. Over the years, it has evolved into a fully-fledged Translation Management Tool.

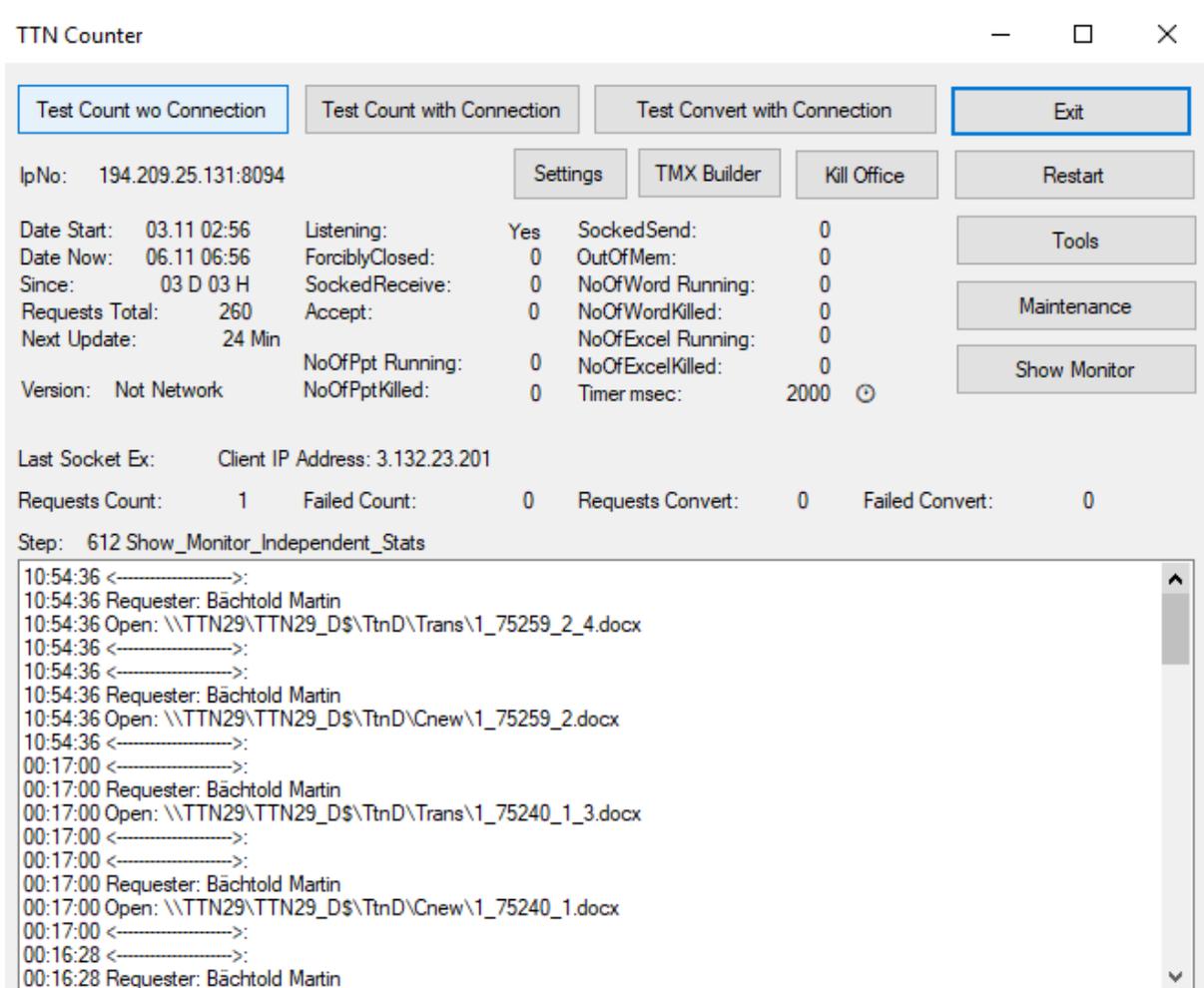


Figure 55: TTN Counter opens Office and other native formats

TTN Counter is a lightweight TCP/IP server installed on the user's machine that communicates with the TCI. When a Translation Manager clicks the "open" icon for a document in the web interface, TTN Counter intercepts the request and launches the appropriate desktop application (Word, Excel, PowerPoint, etc.) with that file. This means the manager can start editing the document immediately in the native Office application without any manual download or upload steps in between. Once editing is done, the changes are saved directly to the file in the system, avoiding the need to separately upload a new version.

Importantly, TTN Counter isn't limited to Office documents. Because it runs locally with system-level access, it can also open other applications like Outlook and perform over two dozen specialized functions that a web server (like an IIS-based web interface) cannot execute due to security restrictions. In essence, TTN Counter bridges the gap between the online TCI and the user's desktop environment, enabling a seamless workflow.

7.12 Benefits of Immediate File Access with TTN Counter

TTN Counter provides *immediate access* to Office files for editing, combining the convenience of a browser-based TMS with the power of desktop applications. This direct-access approach not only saves time but also boosts accuracy and productivity for Translation Managers, making the overall translation workflow smoother and more reliable.

- **No Manual Download/Upload:** All edits can be done directly on the file via the native application, eliminating the time-consuming steps of downloading a document from the browser and uploading it after editing. This streamlines the workflow, especially for frequent changes.
- **Reduced Errors:** Direct editing through TTN Counter helps prevent mistakes such as uploading the wrong file version or forgetting to upload changes altogether. The file that is opened and edited is the same one linked to the project, ensuring consistency.
- **Integration with Desktop Tools:** TTN Counter enables the use of full desktop application functionality. For example, a Translation Manager can trigger Outlook or other email functions directly for sending translated files or communications, something not possible through a browser interface alone. In total, TTN Counter supports more than two dozen such desktop-integrated functions, greatly extending the capabilities of the web-based TCI.
- **Faster Workflow and Efficiency:** By removing browser-imposed barriers, TTN Counter allows Translation Managers to work much faster and more efficiently than with a pure browser setup. There's no waiting for downloads or risk of duplicating effort. Multiple file edits and management tasks can be handled in a fraction of the time, accelerating project turnaround.

8 Workflow Automation

Workflow automation in this system is handled by a dedicated application called Work Loop. This standalone application is designed to perform and coordinate most routine tasks automatically, with minimal human intervention. By configuring Work Loop appropriately, the organisation can offload a large portion of daily workflow tasks to run fully automatically, ensuring efficiency and consistency.

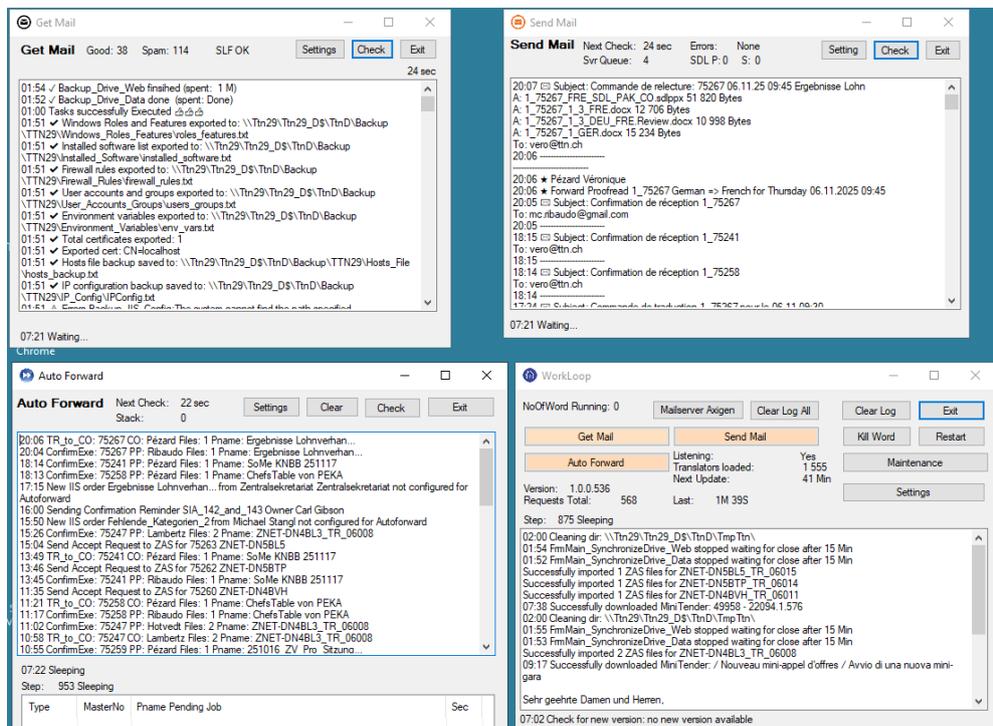
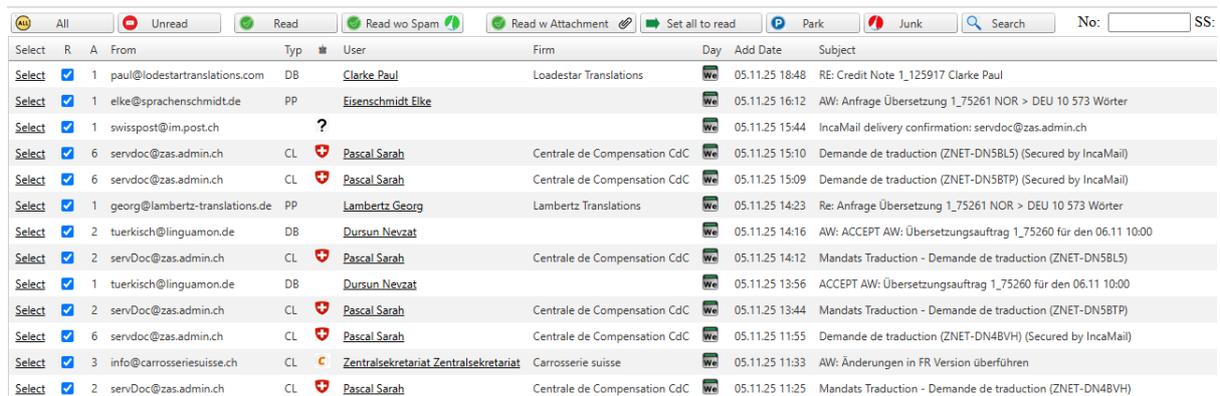


Figure 56: TTN Workloop handles predefined task automatically

8.1 Get Mail Service

The Get Mail Service is an AI-powered mail robot that continuously checks for new incoming messages (approximately every 30 seconds). Whenever a new email arrives, the service automatically assigns it to the corresponding translation order or the responsible Translation Manager. This service interfaces with various channels – it checks email servers, monitors FTP directories, accesses IncaMail, and other mail services – to download files or messages from all kinds of sources. Most incoming mails contain a unique *fingerprint* (such as a translation number or similar identifier), which the Get Mail Service uses to recognize the related order. Upon identification, the mail is attached to the appropriate order and made visible to the Translation Manager in charge. The Translation Manager also receives a summary of the mail on their mobile phone, allowing them to keep track of every new piece of information in real time without needing to constantly check their inbox.



Select	R	A	From	Typ	User	Firm	Day	Add Date	Subject
Select	<input checked="" type="checkbox"/>	1	paul@lodestartranslations.com	DB	Clarke Paul	Loadestar Translations	We	05.11.25 18:48	RE: Credit Note 1_125917 Clarke Paul
Select	<input checked="" type="checkbox"/>	1	elke@sprachenschmidt.de	PP	Eisenschmidt Elke		We	05.11.25 16:12	AW: Anfrage Übersetzung 1_75261 NOR > DEU 10 573 Wörter
Select	<input checked="" type="checkbox"/>	1	swisspost@im.post.ch		?		We	05.11.25 15:44	IncaMail delivery confirmation: servdoc@zas.admin.ch
Select	<input checked="" type="checkbox"/>	6	servdoc@zas.admin.ch	CL	Pascal Sarah	Centrale de Compensation CdC	We	05.11.25 15:10	Demande de traduction (ZNET-DN5BL5) (Secured by IncaMail)
Select	<input checked="" type="checkbox"/>	6	servdoc@zas.admin.ch	CL	Pascal Sarah	Centrale de Compensation CdC	We	05.11.25 15:09	Demande de traduction (ZNET-DN5BTP) (Secured by IncaMail)
Select	<input checked="" type="checkbox"/>	1	georg@lambertz-translations.de	PP	Lambertz Georg	Lambertz Translations	We	05.11.25 14:23	Re: Anfrage Übersetzung 1_75261 NOR > DEU 10 573 Wörter
Select	<input checked="" type="checkbox"/>	2	tuerkisch@linguamon.de	DB	Dursun Nevzat		We	05.11.25 14:16	AW: ACCEPT AW: Übersetzungsauftrag 1_75260 für den 06.11 10:00
Select	<input checked="" type="checkbox"/>	2	servDoc@zas.admin.ch	CL	Pascal Sarah	Centrale de Compensation CdC	We	05.11.25 14:12	Mandats Traduction - Demande de traduction (ZNET-DN5BL5)
Select	<input checked="" type="checkbox"/>	1	tuerkisch@linguamon.de	DB	Dursun Nevzat		We	05.11.25 13:56	ACCEPT AW: Übersetzungsauftrag 1_75260 für den 06.11 10:00
Select	<input checked="" type="checkbox"/>	2	servDoc@zas.admin.ch	CL	Pascal Sarah	Centrale de Compensation CdC	We	05.11.25 13:44	Mandats Traduction - Demande de traduction (ZNET-DN5BTP)
Select	<input checked="" type="checkbox"/>	6	servdoc@zas.admin.ch	CL	Pascal Sarah	Centrale de Compensation CdC	We	05.11.25 11:55	Demande de traduction (ZNET-DN4BVH) (Secured by IncaMail)
Select	<input checked="" type="checkbox"/>	3	info@carrosseriesuisse.ch	CL	Zentralsekretariat Zentralsekretariat	Carrosserie suisse	We	05.11.25 11:33	AW: Änderungen in FR Version überführen
Select	<input checked="" type="checkbox"/>	2	servDoc@zas.admin.ch	CL	Pascal Sarah	Centrale de Compensation CdC	We	05.11.25 11:25	Mandats Traduction - Demande de traduction (ZNET-DN4BVH)

Figure 57: The AI mail robot classifies emails and assigns them to orders and accounts

8.2 Auto-Forward Service

The Auto-Forward Service automatically prepares orders to be sent out to the next parties in the workflow (translators, proofreaders, or clients) as soon as the orders are ready for them. It handles the logistics of forwarding files and information, ensuring that each contributor in the process receives what they need without delay. This service also queues up warning notifications for Translation Managers if something requires attention – for example, if an order is running late or if an expected file has not arrived. By supervising late or incomplete orders in this way, the Auto-Forward Service helps keep projects on schedule and makes sure no task falls through the cracks.

8.3 Send Mail Service

The Send Mail Service manages the distribution of completed translation files and automated notifications. It can send finalized files to clients via email and also dispatch messages or alerts through other channels like WhatsApp or SMS to keep everyone informed. In addition, this service transfers files to designated FTP or SSH servers when required (for instance, delivering translations to a client's FTP site) and uploads documents to secure platforms such as IncaMail. By handling multiple delivery channels, the Send Mail Service ensures that files reach their destination in whatever format or method the client or translator prefers, all without manual intervention.

8.4 Workflow Optimization and Benefits

Work Loop is not just a simple background service running continuously – it is a robust standalone application that actively oversees and optimizes the entire translation workflow. Because it operates independently of the main IIS-based web application, it can run continuously and reliably without impacting the user-facing system. Work Loop recognizes new orders and incoming translated files from translators as soon as they appear (whether via email, FTP upload, or other channels) and automatically integrates those files into the database and the appropriate project records. It also supervises all other applications and services in the workflow, effectively acting as a central orchestrator that makes sure each component is doing its job correctly and on time.

This application significantly improves error detection and response in the workflow. If any part of the process fails or encounters an error – for example, if a file download from an FTP server fails, or a deadline is missed – Work Loop will detect the issue immediately. It then sends instant SMS alerts to the Translation Managers, so they are notified right away about the problem and can take action if needed. Work Loop also handles special requests that might require interaction with web interfaces by using Selenium-driven browser automation to download or upload files from web portals when necessary. Additionally, it continuously monitors deadlines for all active orders, sending reminders or escalating issues if a deadline is approaching and a task isn't completed.

By automatically forwarding orders and files to the right people at the right time – including sending completed translations to proofreaders for review and then delivering the final documents to clients – Work Loop ensures a smooth handoff between each stage of the translation process. The result of implementing Work Loop is a highly optimized workflow: routine tasks are handled faster and more reliably, human error is greatly reduced, and Translation Managers can focus on critical decisions rather than manual tracking. Overall, this standalone application has proven to streamline operations, improve turnaround times, and provide real-time oversight of the entire translation project pipeline, greatly benefiting both the translation team and their clients.

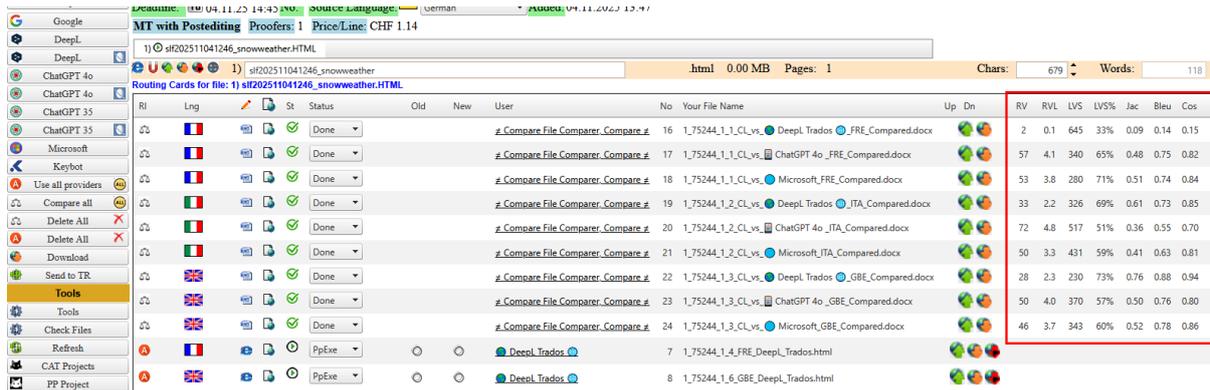
9 AI and Automatic Translation

9.1 Translation with all major AI Translation Services

TTN TMS offers three levels of automatic translation in its workflow:

1. Full post-editing
2. Light post-editing
3. Fully automatic translation

The files are systematically translated by multiple AI translation providers.



The screenshot shows the TTN TMS interface with a file comparison table. The table lists 24 rows of comparison results for the file 'snowweather.HTML'. Each row includes a 'No.' (number), 'Your File Name', 'Up', 'Dn', and a set of metrics: RV, RVL, LVS, LVS%, Jac, Bleu, and Cos. The metrics are used to evaluate the quality of the translation from different providers. A red box highlights the last row (No. 46) which shows a comparison between DeepL and Trados for the German file.

No.	Your File Name	Up	Dn	RV	RVL	LVS	LVS%	Jac	Bleu	Cos
16	1_75244_1_1_CL_vs_DeepL_Trados_FRE_Compared.docx			2	0.1	645	33%	0.09	0.14	0.15
17	1_75244_1_1_CL_vs_ChatGPT_4o_FRE_Compared.docx			57	4.1	340	65%	0.48	0.75	0.82
18	1_75244_1_1_CL_vs_Microsoft_FRE_Compared.docx			53	3.8	280	71%	0.51	0.74	0.84
19	1_75244_1_2_CL_vs_DeepL_Trados_ITA_Compared.docx			33	2.2	326	69%	0.61	0.73	0.85
20	1_75244_1_2_CL_vs_ChatGPT_4o_ITA_Compared.docx			72	4.8	517	51%	0.36	0.55	0.70
21	1_75244_1_2_CL_vs_Microsoft_ITA_Compared.docx			50	3.3	431	59%	0.41	0.63	0.81
22	1_75244_1_3_CL_vs_DeepL_Trados_GBE_Compared.docx			28	2.3	230	73%	0.76	0.88	0.94
23	1_75244_1_3_CL_vs_ChatGPT_4o_GBE_Compared.docx			50	4.0	370	57%	0.50	0.76	0.80
24	1_75244_1_3_CL_vs_Microsoft_GBE_Compared.docx			46	3.7	343	60%	0.52	0.78	0.86
7	1_75244_1_4_FRE_DeepL_Trados.html									
8	1_75244_1_6_GBE_DeepL_Trados.html									

Figure 58: Parallel translation using all major AI translation services

The translated outputs are compared with each other, and the system produces several comparison metrics to evaluate which provider performs best. The automatic translations are run both with and without using translation memory (TM) and termbase data. This allows evaluation of each translation provider's quality and helps determine which LLM (large language model) works best. It also helps determine the added value of data provided by GroupShare. Last but not least, this approach can even detect whether a translator performed the translation themselves or used an AI tool. Each AI provider has its own distinct "DNA" or linguistic signature, which is very difficult to eliminate; it is almost impossible for a human translator to replicate the exact same wording.

TTN TMS can integrate numerous large language model (LLM) and machine translation (MT) engines. It runs hundreds of tests and calculates various comparison metrics, such as the number of revisions, revisions per line, Levenshtein distance, Jaccard index, BLEU score, and cosine similarity index. It then ranks the output according to quality. The results clearly show that AI translations improve significantly when generated with the support of a translation memory and a termbase.

No	Your File Name	Up	Dn	RV	RVL	LVS	LVS%	Jac	Bleu	Cos
42	CL → DeepL Trados GBE.docx			45	1.8	170	91%	0.86	0.96	0.99
28	CL → DeepL Trados FRE.docx			64	2.2	356	83%	0.75	0.91	0.98
35	CL → DeepL Trados ITA.docx			71	2.3	595	72%	0.77	0.88	0.91
36	CL → ChatGPT 4o Trados ITA.docx			88	2.9	672	68%	0.64	0.81	0.84
44	CL → ChatGPT 35 Trados GBE.docx			77	3.0	450	75%	0.73	0.88	0.97
43	CL → ChatGPT 4o Trados GBE.docx			78	3.1	530	70%	0.73	0.87	0.96
37	CL → ChatGPT 35 Trados ITA.docx			93	3.1	730	65%	0.65	0.81	0.86
47	CL → Microsoft GBE.docx			88	3.4	538	70%	0.68	0.91	0.97
39	CL → Google ITA.docx			116	3.8	949	55%	0.48	0.73	0.84
46	CL → Google GBE.docx			102	4.0	523	71%	0.65	0.89	0.97
33	CL → Microsoft FRE.docx			120	4.0	866	58%	0.55	0.77	0.93
40	CL → Microsoft ITA.docx			125	4.1	1'011	52%	0.50	0.72	0.81
32	CL → Google FRE.docx			127	4.3	779	62%	0.54	0.79	0.93
34	CL → ChatGPT 35 FRE.docx			132	4.5	1'010	54%	0.48	0.74	0.89
48	CL → ChatGPT 35 GBE.docx			114	4.5	664	65%	0.61	0.86	0.96
45	CL → ChatGPT 4o GBE.docx			120	4.7	554	69%	0.63	0.84	0.96
41	CL → ChatGPT 35 ITA.docx			143	4.7	1'121	47%	0.44	0.72	0.80
38	CL → ChatGPT 4o ITA.docx			156	5.1	1'010	52%	0.52	0.77	0.82
31	CL → ChatGPT 4o FRE.docx			158	5.3	763	63%	0.50	0.81	0.92

Figure 59: MT providers ranked by multiple comparison metrics

Ref.	User	Src	Tgt	File Name	Date	Cur	Price	Revs	Minutes	CharCount	WordCount	Price/Line	Price/Word
1_70791_1,2	Stucki Thomas	DE	IT	sR202312211518_snowweather_ITA.html	21.12.23 16:19	CHF	131.20	210	58	3 782	678	1.73	0.19
1_70695_1,1	Stucki Thomas	DE	FR	SLF202312091458_snowweather_FRE.html	09.12.23 15:59	CHF	135.85	190	53	3 785	781	1.79	0.17
1_70695_1,2	Stucki Thomas	DE	IT	SLF202312091458_snowweather_ITA.html	09.12.23 15:59	CHF	135.85	186	51	4 043	771	1.68	0.18
1_70825_1,2	Stucki Thomas	DE	IT	sR202312301458_snowweather_ITA.html	30.12.23 15:59	CHF	119.95	182	37	3 552	653	1.69	0.18
1_70659_1,2	Stucki Thomas	DE	IT	SLF202312021458_snowweather_ITA.html	02.12.23 15:59	CHF	186.23	181	34	3 159	605	2.95	0.31
1_70787_1,2	Stucki Thomas	DE	IT	sR202312201458_snowweather_ITA.html	20.12.23 15:59	CHF	141.00	181	50	4 272	771	1.65	0.18
1_70697_1,2	Stucki Thomas	DE	IT	SLF202312101501_snowweather_ITA.html	10.12.23 18:02	CHF	138.15	169	42	4 080	764	1.69	0.18
1_70810_1,2	Stucki Thomas	DE	IT	sR202312241514_snowweather_ITA.html	24.12.23 16:15	CHF	106.35	168	44	3 280	615	1.62	0.17
1_70787_1,3	Stucki Thomas	DE	GB	sR202312201458_snowweather_GBE.html	20.12.23 15:59	CHF	141.00	159	39	3 627	747	1.94	0.19
1_70811_1,2	Stucki Thomas	DE	IT	sR202312251507_snowweather_ITA.html	25.12.23 18:08	CHF	110.95	158	36	3 150	571	1.76	0.19
1_70791_1,1	Stucki Thomas	DE	FR	sR202312211518_snowweather_FRE.html	21.12.23 16:19	CHF	131.20	155	42	3 748	717	1.75	0.18
1_70806_1,2	Stucki Thomas	DE	IT	sR202312231513_snowweather_ITA.html	23.12.23 16:14	CHF	103.15	151	40	3 294	615	1.57	0.17

Figure 60: Continuous quality benchmarking against human translation

TTN TMS tracks the number of changes made by the human reviser and measures the time taken, compared to a traditional translation.

9.2 Term Extraction

The term extraction tool is an important component of the system; it is valuable not only for traditional translators, but also for producing terminology-aware AI translations. TTN TMS

allows users to extract terms from translation memories, websites, or large file repositories. The translator or translation manager can choose from a wide variety of extraction tools that suggest translation candidates from parallel corpora.

TTN TMS integrates a range of extraction engines and services, including:

- Rainbow Term Extraction
- TBXTools
- tm2tb (Translation Memory to Termbase)

Smaller parallel corpora may also be extracted using ChatGPT 5.0. It can connect to Azure Cognitive Services – Key Phrase Extraction, a cloud-based solution by Microsoft accessible via a C# SDK. It is a commercial service. TTN TMS incorporates NuGet packages for Stanford CoreNLP to enable POS (part-of-speech) tagging and to use pretrained models. Stanford CoreNLP comes with pretrained segmentation models for both Chinese and Arabic.

The screenshot displays the 'Term Extractor' interface. At the top, it shows configuration options: Source Lang (German), Target Lang (French), AI Provider (ChatGPT 5.0), and TermBase (TTN_SLF_Satzkatalog). Below this are buttons for 'Extract', 'Exit', 'Load Terms', and 'Add to TB'. The 'Select TMs' section includes a dropdown for 'TTN_SLF_deDE_frFR' and an 'Add' button. The 'Website' section is empty with an 'Add' button. The 'No Duplicates' section includes a dropdown for 'TTN_AGVS' and an 'Add' button. The main area is divided into two columns: 'Proposed Terms' and 'Terms to Add'. The 'Proposed Terms' column lists various German terms with their corresponding French translations and degrees of severity (e.g., 'gering' (Stufe 1) -> 'faible' (degré 1)). The 'Terms to Add' column shows a subset of these terms, including 'erheblich' (Stufe 3) -> 'marqué' (degré 3), 'mässig' (Stufe 2) -> 'limité' (degré 2), and 'ab dem Mittag' -> 'à partir de midi'. Navigation arrows are visible between the two columns.

Figure 61: Term extractor with proposed terms to be added to MultiTerm database

Users can review ranked candidates, filter by frequency, length and domain, and drag terms from the proposed list to the final list—or accept all in a single action. Approved entries are normalised (e.g. case and morphology), de-duplicated, and written straight to the MultiTerm termbase.

The term extractor accelerates onboarding for new linguists, improves consistency across projects, and reduces rework by enforcing approved terminology at source. By feeding validated terms back into Translation Memory and AI pipelines, it optimises MT output and raises overall translation quality. Centralised curation strengthens terminology governance,

ensures traceability, and enables rapid reuse of domain-specific terms across language pairs and programmes.

9.3 Terminology Synchronisation with AI Providers

Terminology (for example, DeepL glossaries) is automatically synchronised. After synchronisation, the automatic translation achieves a much better score.

DeepL Glossary

The screenshot shows the DeepL Glossary interface. At the top, there are buttons for 'Refresh', 'Delete Glossary', and 'Exit'. Below these is a green bar with the text 'Drop Zone Drop the comma separated CSV or tab separated TSV file here'. The main area displays the following information:

Name: **TTN_SLF_de_en.csv** Src Lang: **de** Trg Lang: **en**
 Entries: **2 818** Creation: 19.11.23 06:46:17 Id: c5b23ed2-f253-43c7-9f56-54002ac6925d

Source	Target
Abend	evening
Abflauen der Bise	easing of the bise wind
Abflauen des Windes	easing of the wind
Abkühlung	consequence of falling temperatures
Ablagerungsräume	deposition zones
Abrissbreite	slab width
Achenkirch	Achenkirch
Adamello- Presanella	Adamello- Presanella
Adelboden	Adelboden
Ahr	Ahr
Ahrntal	Ahrntal

Figure 62: Automatic synchronisation between MultiTerm and DeepL glossary

The user can supervise the synchronisation process and delete any new glossaries on DeepL, but usually no human intervention is necessary.

9.4 Web-to-TM

In 2006, TTN TMS launched its own translation search engine called Keybot. This tool crawls the web at high speed to harvest multilingual content, creating a parallel database for each multilingual domain it encounters. It can also process large document repositories by aligning bilingual files, thereby generating extensive parallel corpora from existing translations.

The screenshot shows the Keybot search engine interface. At the top, it displays 'Unites de traduction UT: 829 Sites 1 - 10 sur 55 pour régulateur Français (0.53 sec.)'. Below this, there are several search results for the term 'régulateur':

- [Montre 3 UTs von www.ttn-archive.ch] DOC §: 46/52 55k 1_22340_1 VP-H080.doc 19.12.06 J. Duran**
 FRE | T ↑ ↓ Aide au parking + régulateur électronique de vitesse et limiteur + rétroviseurs rabattables électriquement + lève-vitres électrique arrière
 GER | I I T ↑ ↓ Einparkhilfe + elektronischer Geschwindigkeitsregler und -begrenzer + elektrisch einklappbare Aussenspiegel + elektrische Fensterheber hinten
- [Montre 1 UT von www.skoda-auto.ch] JSP §: 34/40 41k SKODA - Fabia - Octavia - Superb**
 FRE | T ↑ ↓ Régulateur de vitesse
 GER | I I I T ↑ ↓ Geschwindigkeitsregelanlage
 ITA | I I I T ↑ ↓ Regolatore di velocità
- [Montre 32 UTs von www.brand.opel.ch] CFM §: 56/70 24k Opel - Showroom - Version**
 FRE | T ↑ ↓ Régulateur de vitesse
 GER | I I I T ↑ ↓ Geschwindigkeitsregler
 ITA | I I I T ↑ ↓ Regolatore della velocità

Figure 63: Client-specific parallel corpora for each client website

The Keybot search engine detects subtle differences in terminology across client websites, reinforcing confidence in the TTN system. When a client starts working with TTN, the system

already recognises customer-specific wording, which can be immediately reused by converting existing parallel corpora into translation memories on the GroupShare server.

'Web to TM' entails combing the internet and converting it into an enormous translation memory:

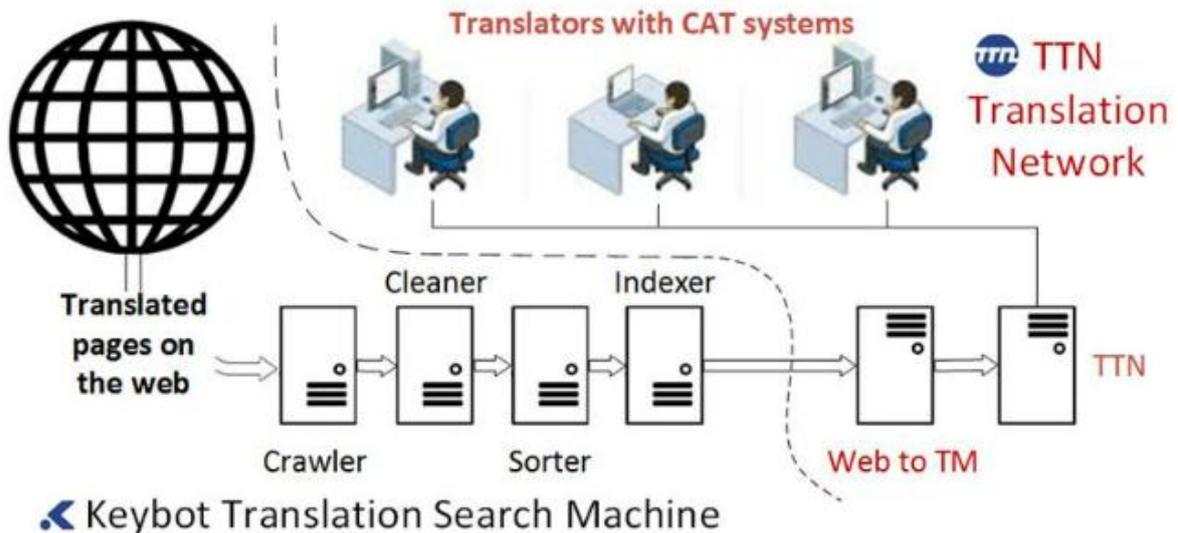


Figure 64: Web-to-TM converts entire websites into TMs

To find translated websites, Keybot uses high-performance web crawlers that traverse sites and extract translated text. The system automatically pairs source and target language content, converting entire pages into large parallel corpora. These crawlers efficiently identify matching texts across languages, ensuring that no translated segment is missed.

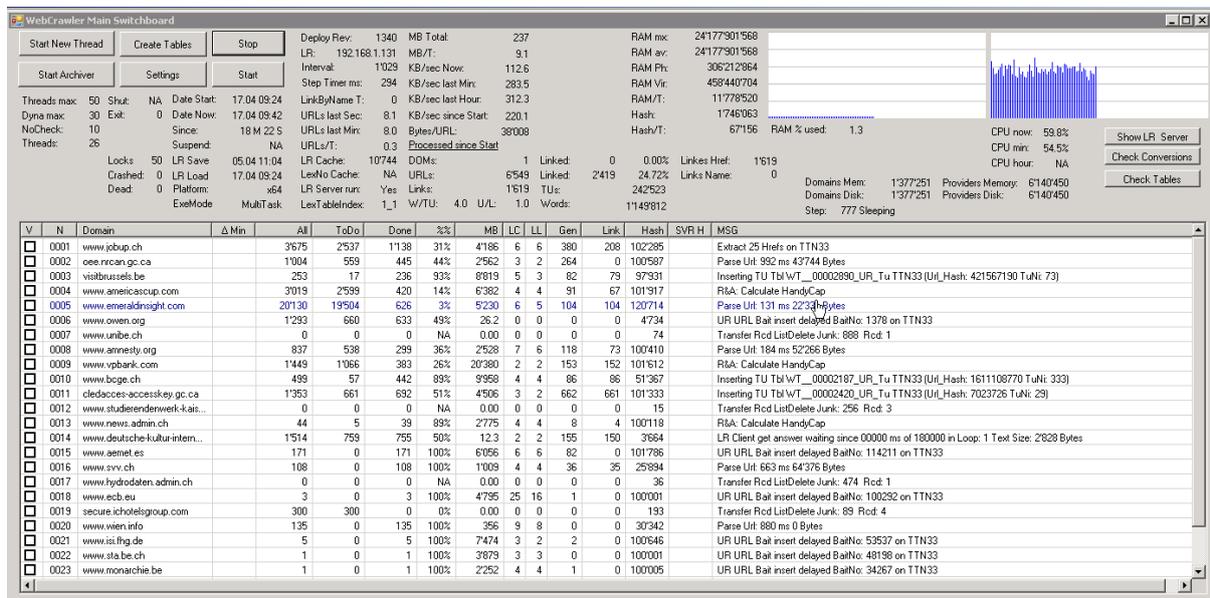


Figure 65: High-performance crawlers extract translated text from the web

The web crawler maintains a separate parallel corpus for each domain it scans, effectively capturing the site's complete bilingual content.

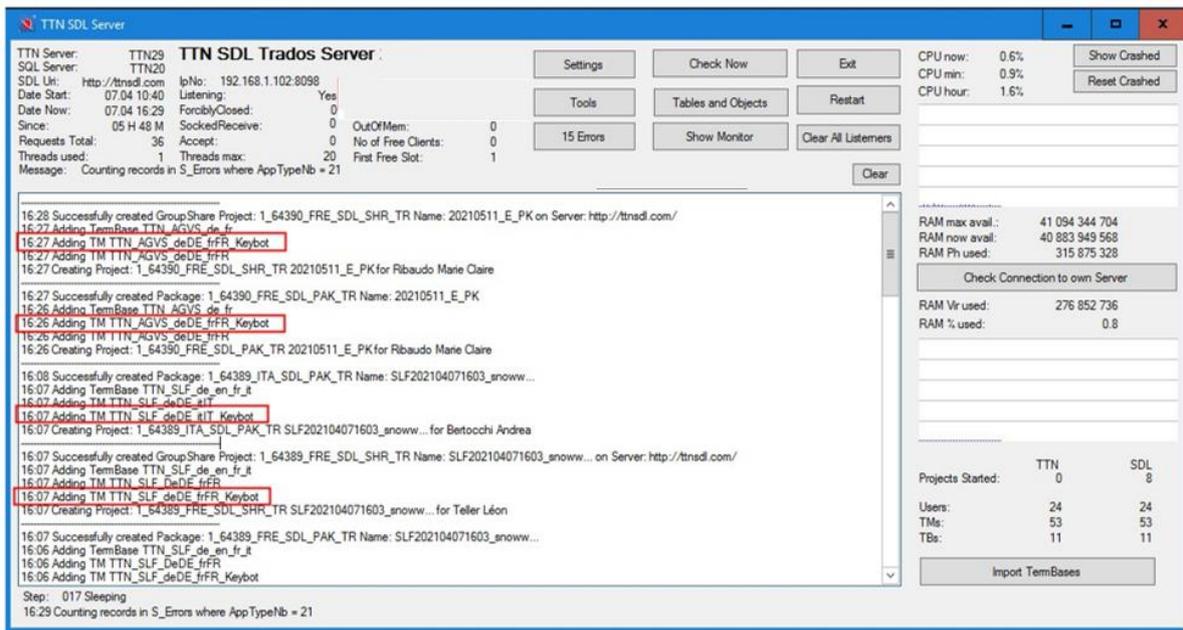


Figure 66: Automatic integration of Keybot TMs during project generation

Once the parallel texts are extracted and aligned, they are converted into Translation Memories (TMs) and published directly to the GroupShare server. These TMs are then automatically added to each new translation project. In practice, this means translators have immediate access to vast amounts of high-quality translated content relevant to their project. The TM data serves as a valuable reference, allowing linguists to reuse proven translations and maintain consistency without any manual setup.

Thanks to Web-to-TM, TTN TMS enables organisations to leverage the full linguistic potential of the internet. The platform can automatically identify and align multilingual websites – even for domains where no prior TM exists – and turn them into rich translation memories. This dramatically accelerates translation projects, ensures consistency in terminology and style, and reduces translation costs through maximal reuse of existing translations.

With Web-to-TM, entire collections of documents – such as annual reports, status reports, contracts, technical standards, regulatory frameworks, and complete catalogues – are aligned and indexed. The result is a comprehensive, always-growing linguistic knowledge base that continuously improves translation quality and efficiency across the organisation over time.

Furthermore, translation memories produced by Web-to-TM can directly enhance AI-driven translation systems. Integrating a TM with modern AI translation engines yields more consistent and accurate automated translations. The AI can leverage the high-quality, human-verified translations in the TM to guide its output, avoiding the inconsistencies often seen in raw machine translation. In fact, studies have shown that using existing TM content alongside generative AI models can significantly boost translation quality – one experiment reported up to a 20-point increase in BLEU score after supplying the AI with relevant TM examples. In essence, combining AI translation with robust TMs offers the best of both worlds: the speed and scale of machine-generated translation, and the accuracy and reliability of human-curated translations. This synergy allows organisations to scale global communication without sacrificing quality.

9.5 AI Quality Check

Whether a translation is produced manually or via a machine translation engine, both the translator’s initial version and the proofread version of the text undergo an AI-based quality check. This process currently leverages a cutting-edge AI system to achieve the best results in reviewing translation quality.

As part of the AI quality check, the system sends individual segments from the XLIFF files to an AI service for evaluation. The AI reviews each segment for accuracy, grammar, spelling, terminology consistency, and overall linguistic quality. If the AI identifies any issues, it records them in a report table with references to the corresponding segment in the XLIFF file.

AI Analyse for 1_75320_1_2_FRE_AiCheck.html AI_TR: Chatgpt 5o Translation Provider Score: 118 issues

Translation AI analyses ChatGPT5.1 1_75320_1_2.docx			
Seg	Source	Targt	AI
24	Responsable de ce cahier	Responsable de ce cahier&	Spurious “&” in target. Remove it.
31	Haberkom, A., Zweifel, B...	Haberkom, A., Doute, B...	“Zweifel” was incorrectly translated as “Doute”. Names must not be translated.
32	danger d’avalanche...	danger d’avalanches...	Same singular/plural error as above.
47	Photos en page couverture	Photos en page de couverture	Missing “de”; corrected version is correct. No error. (But since the source does not contain “de”, the translation adds content. Should match source wording.)
53	...(Foto/SLF:	...(photo/SLF :	The target introduces a trailing colon with no closure: mismatch in punctuation.

Figure 67: Reported issues from the AI Quality Check

This AI-driven check often highlights errors that human reviewers might overlook. For instance, a common issue with certain machine translation engines such as DeepL is the literal translation of proper names. Names like “Baker,” “Fisher,” “Cooper,” or “Turner” might be translated as ordinary words in the target language instead of being recognized as names. Similarly, place names such as “Hill,” “Wood,” or “Brook” can be mistranslated word-for-word. For example, *Greenpeace* may be rendered by DeepL as *la paix verte* in French or *grüner Friede* in German. The system effectively performs an automated double-check, detecting such errors and flagging them for review. However, it is important to note that many issues flagged by the AI are false positives or minor stylistic suggestions that do not require any change.

In practice, the system generates an AI quality report after the translator completes the initial translation. This report is then forwarded to the proofreader, who reviews the flagged items and addresses any valid issues while disregarding incorrect or irrelevant suggestions. After the proofreader uploads the revised translation, the AI quality check runs again on the updated content. The system recognizes which previously reported issues have been resolved and omits them from the new results, reporting only any remaining or newly detected issues. By the end of this iterative process, the translation manager receives a final, concise report of outstanding issues and can quickly verify if any problems still need attention.

The AI quality check provides an effective safety net for quality assurance. It often catches minor but critical errors such as typos in headings or front matter, mistakes with proper names, or omitted words. This additional automated review serves as an important safeguard, helping to prevent errors in high-stakes documents such as important contracts or published materials that could have been missed without this extra layer of quality control.

10 Secure Online Handling

10.1 Introduction

Confidential translation projects require strict handling to ensure sensitive information is never exposed. Unlike standard workflows where files might be downloaded or emailed, highly confidential documents are processed entirely within a secure online environment. TTN TMS provides a dedicated platform that allows translators to work on such projects without ever obtaining the source files on their local machines. All content remains on secure servers located in Switzerland, with no reliance on U.S. cloud infrastructure. This on-premises approach means documents never leave TTN's controlled environment, addressing data residency and privacy requirements. Connections to the system are protected with strong encryption (TLS 1.2 or higher for data in motion), and files are stored encrypted at rest. In practice, from upload to delivery, the document stays within TTN's protected network – it is uploaded to the secure server, translated through a restricted session, and returned to the client through the same encrypted platform. No unencrypted email attachments or local copies are used at any point, ensuring end-to-end confidentiality.

This chapter explains how TTN TMS handles confidential non-PDF translation projects via secure online workflows. (Secure handling of PDF files, such as scanned medical records or other top-secret PDFs, is covered separately – see section **Error! Reference source not found.**) The focus here is on standard digital documents (e.g. Word, Excel, InDesign, PowerPoint, etc.) that can be translated without file download. We outline the secure workspaces provided to translators, the robust authentication and access controls in place, the legal and procedural safeguards like NDA enforcement, and any special-case exceptions. These measures collectively ensure that translators can work efficiently on sensitive content while clients remain confident that their information is safe. (For anonymisation of personal data in translations, refer to section 16. Secure session logging and monitoring are discussed in section 17.)

10.2 Secure Access and Online Workspaces

For confidential projects, TTN TMS enables translators to work within a closed online workspace rather than on local files. Two main approaches are available, both designed to prevent any data from leaving the secure server: an integrated web-based editor and a remote virtual machine environment. In either case, the translator accesses the material through a secure session, and the master documents remain on TTN's servers at all times.

- **Web-Based Online Editor (GroupShare):** Most confidential tasks are handled through the GroupShare online editor integrated into TTN TMS. The translator simply logs into the web portal and translates the content via a browser interface. Source and target text are displayed side by side in a bilingual editor, and translation memory and termbase resources are applied in real time. The web editor is fully hosted on TTN's secure infrastructure – no file is ever downloaded to the user's computer.

Typical file operations are locked down in this environment. There is no "Save As" option or file export capability that would allow a translator to save the document externally. The print function is disabled in the interface. Clipboard use is tightly controlled as well: the system prevents large-scale copying by allowing only small snippets of text (for example, a single sentence or a limited character count) to be copied at a time. This ensures that

one cannot simply copy the entire content out of the editor. All communication between the translator's browser and the server is encrypted, so even if internet traffic were intercepted, the content would remain indecipherable. The result is an easy-to-use web workspace that feels like a standard translation interface, but with enterprise-grade security measures transparently applied in the background

- **Remote Virtual Machine (VM) Option:** For certain cases – such as very large projects or translators who handle highly sensitive material regularly – TTN can provide an isolated Virtual Machine workspace. In this mode, the translator connects via Remote Desktop (RDP) to a secure VM hosted on TTN's server farm. The VM is essentially a fully featured Windows desktop environment that comes pre-configured with all necessary translation tools (for example, a word processor or specific CAT software) and is locked down for that translator's use. When working in the VM, the translator is viewing and editing the document on the remote server; only the screen images and keystrokes travel over the network.

Just like the web editor, the VM approach prevents data extraction. The remote desktop session is configured so that the clipboard is blocked or redirected – the translator cannot copy text from inside the VM and paste it to their own computer. File transfer channels are also closed: one cannot drag-and-drop files out of the remote desktop window or mount any local drives. Even within the VM, the system restricts saving files to only approved secure folders. In practice, this means a translator can work on the document (for instance, in a desktop application within the VM) but cannot export or print it outside the virtual environment. The VM itself resides on TTN's network with a fixed internal address and is monitored and maintained by TTN's IT team. This option offers an extra layer of isolation, which some clients mandate for top-secret projects or when using specific editing software. Importantly, both the web editor and the VM use encrypted connections (e.g. RDP over TLS) to protect data in transit.

In both scenarios above, the confidential documents remain on the server, and only authorized users can access them through the secure interface. All document content is stored in TTN's secure on-premises data center in Switzerland. TTN does not utilise any third-party cloud storage for these projects – the files never leave TTN's infrastructure.

Throughout the editing process, the system ensures that only the assigned linguists and necessary staff can open the files, and only for the duration required. Even within TTN, access to the files is role-based: a project manager or proofreader might access them via the same secure platform, but no one outside the project (and no unauthorized TTN personnel) can view the content. The platform's safeguards also include continuous monitoring of user actions during these secure sessions. Unusual activities or attempts to bypass restrictions can be detected and logged. (For example, if a user tried to rapidly copy large amounts of text or use an unapproved method to capture data, it would be recorded by the system's logs.) These layers of control guarantee that the sensitive information remains contained within the system at all times.

10.3 Authentication and Document Access Rights

Strong authentication and fine-grained access control are fundamental to TTN TMS's secure handling of confidential projects. Before a translator can even reach the secure workspace described above, they must pass through a rigorous login and verification process. The system supports multiple authentication factors, which can be configured to meet the security policies of different client groups. At a minimum, each user must log in with a unique username and a

strong password. On top of that, two-factor authentication (2FA) is enforced for sensitive projects: the platform can deliver a one-time verification code via SMS, WhatsApp, or email, depending on the preference or policy in place. For example, a translator in one client group may receive an SMS code to enter after their password, while another group might use an emailed confirmation link or a code sent through WhatsApp. The flexibility to choose the second-factor channel allows organizations to align with their internal security standards and the availability of devices.

Additionally, the login process can include a CAPTCHA challenge to ensure that the user is a real person and to thwart automated attacks. These measures (password, second factor, CAPTCHA) can be adjusted per client or user group – for instance, a government client may require multi-factor login for all its translators, whereas an internal corporate team might allow a simpler login if operating on a secured network. In all cases, the authentication process ensures that only vetted, intended users gain entry to the translation platform.

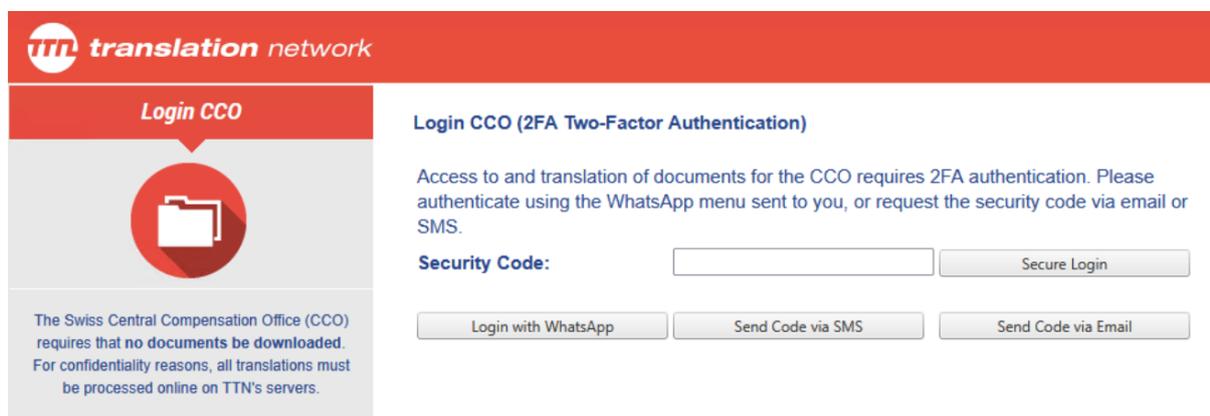


Figure 68: Client-specific authentication and access controls

Once authenticated, users see only the projects and documents they are authorized to access. TTN TMS uses tailored access rules to make sure that confidential files are available exclusively to the assigned translators and relevant staff. Projects are organized under client-specific profiles and secure groups, so that content for one department or client cannot be accessed by users outside that circle. A translator will only have visibility of the jobs to which they have been assigned (and often only for the time window of the assignment). If they are not part of a particular confidential project, it will not appear in their project list at all. This principle of least privilege is enforced system-wide: even within a project, different roles (translator, proofreader, project manager, etc.) have appropriate permission levels, and actions like exporting files are disabled for translators on high-security jobs.

Administrators can fine-tune these access settings on a per-client or per-project basis. The system's flexibility in defining user-level restrictions means each organization can achieve its desired balance between security and convenience. All access attempts and actions are tracked in detailed audit logs, providing a full history of who accessed what and when. This audit trail not only helps in compliance and oversight, but also acts as a deterrent: users are aware that any unauthorized attempt to access or extract data will be noticed and traced.

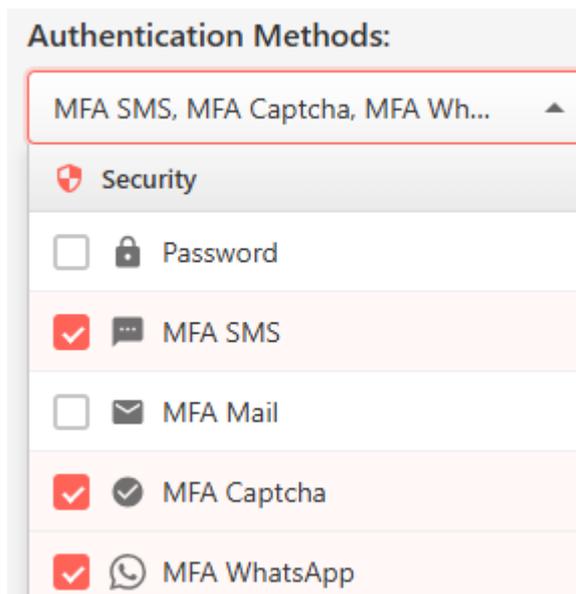


Figure 69: Secure login method selection (multi-factor authentication options)

10.4 Legal Framework and NDA Enforcement

In addition to technical controls, TTN TMS reinforces confidentiality through legal safeguards. A key element is the automatic Non-Disclosure Agreement (NDA) workflow integrated into the platform. When a project is flagged as highly confidential, the system requires each translator – or any user attempting to access the files – to sign a specific NDA before proceeding.

The NDA text is generated automatically based on the project’s classification. For example, it may include the project name, the client’s name, the date, and a reminder of the legal penalties for unauthorized disclosure. This process ensures that even if a translator already has a general NDA on file with the company, they are explicitly reconfirming their confidentiality obligations for each top-secret project. The system records the NDA acceptance – including a timestamp and the user’s identity – thereby creating a verifiable audit trail demonstrating that the individual agreed to the confidentiality terms before any work begins.

Documentation

No	Typ	Status	File Name	Ext	Lang	Chars	Bytes	Add Date	Up Dn	Copy	Del
3	Agreement_TR	OK	1_75397_TR_Confidentiality_Agreement	.pdf				01.12.25 00:12			
4	Agreement_CO	OK	1_75397_CO_Confidentiality_Agreement	.pdf				01.12.25 00:12			

Figure 70: Automatic NDA management – access granted only when status is green

This NDA enforcement mechanism operates hand-in-hand with the system’s access controls. If a user declines the NDA or fails to sign it, they are denied access to the project. Only after agreeing to the non-disclosure terms does the platform allow the secure web editor or VM session to launch for that project. In effect, the NDA is a gateway that must be passed for every highly sensitive job, adding a layer of legal protection on top of the technical security. Clients can thus be assured that every translator working on their confidential content has explicitly accepted a binding confidentiality commitment at that moment, not just as a clause in a long-past contract. From a compliance perspective, this satisfies many organizations’ requirements for handling secret or regulated information – it demonstrates due diligence in ensuring all personnel are aware of their obligations.

Moreover, because the NDA process is automated and mandatory, there are no accidental oversights: the platform will not “forget” to secure an NDA for a confidential project, nor can a user claim they weren’t prompted. Everything is systematically applied. In conjunction with this, TTN’s overall legal framework for the platform aligns with strict data protection laws (such as Swiss regulations and the EU’s GDPR). Data processing agreements and confidentiality clauses are built into the service, but the per-project NDA prompt adds an extra layer specific to each job’s content. By combining robust technology with legal acknowledgments, TTN TMS creates a comprehensive confidentiality shield – both preventing leaks and underscoring the seriousness of handling sensitive data.



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Département fédéral des finances DFF

Centrale de compensation CdC
Affaires internationales et logistiques AIL

Geheimhaltungsverpflichtung bezüglich der Daten, für die die ZAS verantwortlich ist

Frau Manuela Hotvedt hat für die gesamte Dauer der Übersetzung Zugriff auf die für die Übersetzung Nr. ZNET-DNRH37_TR_06079 erforderlichen Daten der Zentralen Ausgleichsstelle ZAS, insbesondere auf medizinische Daten bezüglich einer versicherten Person. Sie verpflichtet sich insbesondere:

- diese Daten ausschließlich im Rahmen ihres Auftrags zu verwenden;
- diese Daten nicht für persönliche Zwecke zu verbreiten oder zu verwenden;
- diese Daten zu vernichten, sobald sie für ihre Auftragsbefreiung nicht mehr erforderlich sind.

Darüber hinaus verpflichtet sich Frau Manuela Hotvedt zur Geheimhaltung aller Daten der ZAS, von denen er/sie im Rahmen eines spezifischen Übersetzungsauftrags Kenntnis

Figure 71: Automatically generated NDA with client- and order-specific data

10.5 Connection Models for Secure Workflows

TTN TMS supports multiple connection models for handling projects, each balancing security and practicality in different ways. Figures 71–73 illustrate three progressively secure workflows – from an emergency mode that relaxes protections for speed, to a standard encrypted file exchange, up to a fully locked-down online workspace. The following subsections explain each model in detail, highlighting differences in security level, file transmission methods, user authentication, and access control.

10.5.1 Delivery-Prioritized Emergency Workflow (Low Security)

In urgent, low-sensitivity scenarios, the priority is rapid delivery even if some security measures are temporarily relaxed. For example, a natural hazard warning or emergency announcement might be translated via an expedited path outside the usual platform. In this delivery-prioritized mode, the system activates predefined fallback channels if standard infrastructure is unavailable or too slow. The source text may be sent to an on-call translator through an automated email alert or a secure FTP link, rather than requiring the translator to log into the full TMS workspace. Likewise, the completed translation might be returned through an encrypted email attachment or direct upload to a client system. These steps bypass the

normal online editor to save precious minutes when content must be disseminated immediately. The trade-off is a relaxed security posture: files leave the protected server environment so that the translator can work offline, reflecting an accepted risk only because the content is not highly confidential and time is of the essence.

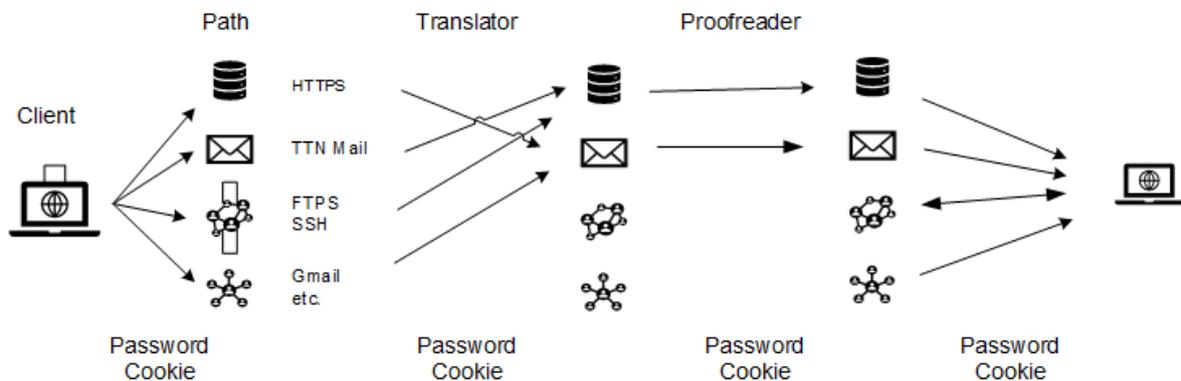


Figure 72: Natural hazard warnings — delivery prioritized, security neglected

10.5.2 Standard Encrypted Workflow (Moderate Security)

The standard workflow represents the typical secure file exchange used for most projects. In this model, translators and reviewers access the project files through normal secured channels (for instance, via the TTN TMS web portal or integration with Trados Studio) using their credentials. They download the documents to their own computer and work locally with their familiar tools. All transfers occur over encrypted connections – for example, an HTTPS web download, a secure API call from Trados, or even an encrypted email if the platform sends a translation package by mail. Throughout this process, files are protected in transit by TLS encryption and are only accessible to the authorized user. The translator must log in with at least a username and password (and, depending on client settings, possibly a second authentication factor) to retrieve the assignment. This ensures secure access to the files while still allowing the convenience of local editing.

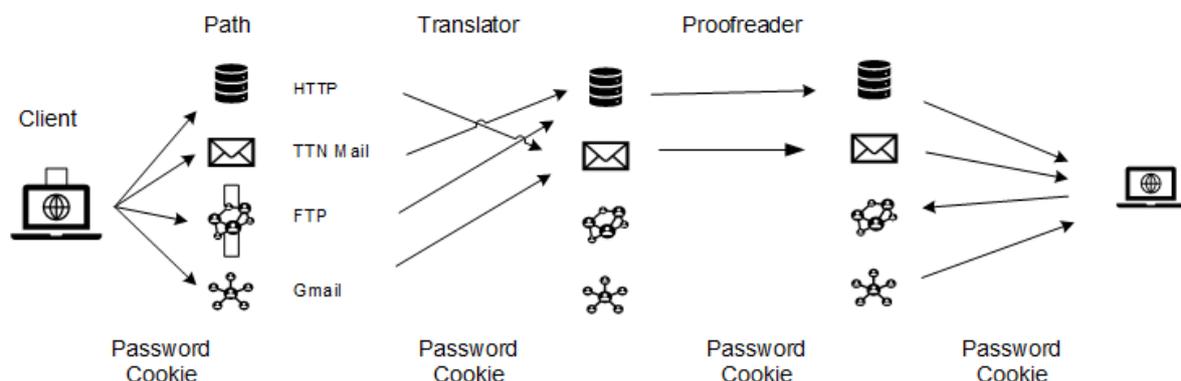


Figure 73: Normal workflow: secure access and encrypted transmission

Once downloaded in the standard model, the file exists on the user’s machine, so this approach carries moderate security relative to a fully closed system. The user is required to comply with TTN’s information security policies, which are aligned with ISO, and is responsible

for handling all locally processed content in accordance with defined confidentiality, access-control, and data-protection requirements, acknowledging that certain actions on local systems cannot be fully enforced by technical controls alone. However, TTN TMS enforces access control up to the point of download: only the designated linguist or staff member can retrieve the document, and only within the time window of their assignment. Project visibility is limited by client-specific profiles and user roles, so a translator will only see jobs they are assigned, and no one outside the project can intercept the files from the server. In summary, the standard encrypted model keeps transmission secure and restricts access to approved personnel, but it entrusts the individual translator with responsibly handling the document on their local system.

10.5.3 Fully Secure Online Workflow (High Security)

The fully secure workflow provides the highest level of protection by confining all translation activities within TTN’s controlled environment. In this model, no external copies of the document are ever downloaded – work is done either in a web-based editor or on a remote virtual machine, both hosted on TTN’s secure on-premises servers. Users must undergo strong authentication (including multi-factor login) to even reach the workspace. Once inside, the system strictly governs what they can do with the content. The document never leaves the secure server: the linguist only interacts with it through an encrypted viewer or remote desktop session. All usual file operations that could leak data are disabled. For example, there is no “Save As” function to export the file, printing is completely prohibited, and copy-paste is heavily restricted. Similarly, in a VM scenario, features like clipboard transfer or drive sharing to the local computer are turned off. These measures ensure that even if a translator attempted to bypass rules, the platform’s safeguards would prevent any large-scale data exfiltration.

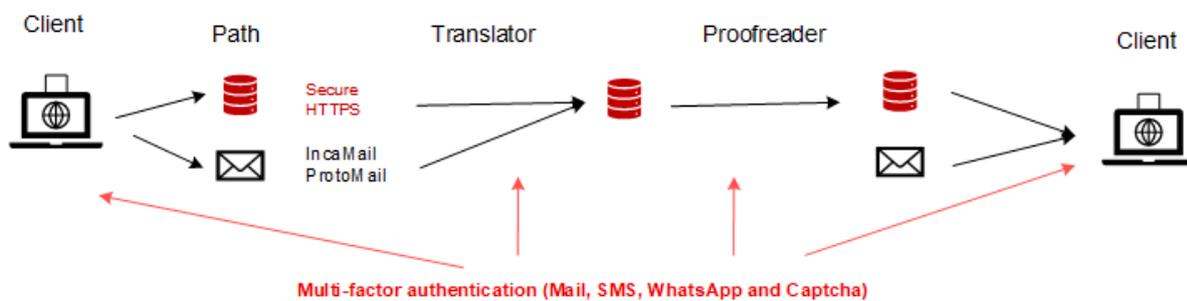


Figure 74: Secure workflow: 2FA authentication, secure environment

In the fully secure model, access control is granular and monitored continuously. Only authorised individuals can open the project, and even then they can only do so within the secure interface – no one can access the document contents externally. The platform logs all user actions and can detect unusual activity, providing an audit trail for compliance. Additional protections can include real-time session monitoring and automatic anonymisation of sensitive data in translation memory entries, so that no personal or confidential details are exposed beyond the immediate task. This highest-security workflow is often mandated for top-secret material, legal documents, or any content under strict data protection regulations. It gives clients full confidence that their information remains sealed within a controlled environment. In exchange for this security, the workflow is more controlled and formal – users must authenticate with multi-factor methods, and they work through a slightly more managed

process (web editor or VM) rather than a local application. Nevertheless, TTN TMS's design makes this as seamless as possible, so translators can still work efficiently.

11 Performance characteristics

11.1 Accuracy of TM and Termbase Matching and Insertion

Trados Studio, in combination with GroupShare, leverages robust translation memory and terminology integration to ensure high accuracy in segment matching and term recognition. The server-hosted TM employs an intelligent memory system that efficiently identifies and reuses familiar text from previous translations. When a 100% or fuzzy match is available, GroupShare Online Editor and Trados Studio present the exact previous translation for insertion, maintaining consistency and saving time. Terminology from the centralized termbase is recognized in real time during translation; any term present in the source segment and stored in the termbase is automatically highlighted. The translator can then easily insert the approved term into the target segment (via a quick keystroke or pick list), ensuring correct terminology usage throughout the document. This tight TM/TB integration means segment translations and terms are not only retrieved quickly but inserted accurately, reducing human error and enhancing translation quality.

11.2 Accuracy of Exact-Match Searches in all TMs/TBs

Trados and GroupShare Online Editor support precise searching across all connected translation memories and termbases in exact-match mode. This means that if an identical segment or term exists in any of the linked resources, the system will reliably retrieve it. All server-based TMs and TBs can be searched simultaneously, ensuring that no match stored in a secondary memory or termbase is overlooked. The search engine is based on the same proven technology used in Trados Studio, renowned for its high accuracy in match retrieval. Translators can also fine-tune the search behaviour – for example, by adjusting the minimum match score for fuzzy matches or applying filters – to balance search breadth and speed. In exact-match mode, however, Trados restricts results to identical string matches, guaranteeing that any entry matching the query exactly will be found if it exists. This enables translators to confidently leverage all previously translated segments and approved terms, ensuring maximum consistency and optimal use of existing translation assets for high-quality results.

11.3 Segmentation Flexibility and Accuracy

The Trados editing environment offers flexible segmentation control to handle cases where the default sentence splitting may be incorrect. If the initial segmentation is not optimal (for example, the source text had an abbreviation or formatting that caused an unintended break), translators can manually merge or split segments during translation. The interface supports merging two segments into one or splitting one into two, even in the online collaboration environment, ensuring translators can correct segmentation on the fly. For instance, two segments that belong together can be merged with a simple command and similarly a long segment can be split if needed.

In addition, segmentation rules are adjustable to prevent systematic issues in the first place. Trados allows customizing the SRX-based segmentation rules via project settings or translation memory settings. Language-specific rules (e.g. preventing segmentation on certain abbreviations or enforcing breaks on custom delimiters) can be edited by modifying the TM's Language Resources – Segmentation settings. This means organisations can configure how

text is segmented according to their needs or the structure of the source content. Between the ability to fine-tune rules and the option to merge/split segments during translation, GroupShare ensures that segmentation is accurate and does not hinder the translation process. Proper segmentation contributes to higher match leverage and translation quality, as translators can work with logically complete segments and fully leverage TM matches without losing context.

11.4 Real-Time Terminology Updates

In an SDL Trados GroupShare environment, any changes to terminology entries are reflected immediately for all users. The termbase is stored centrally (via MultiTerm Server as part of GroupShare), so when one user adds a new term or modifies an entry, that update becomes instantly available in term searches and term recognition for everyone on the project. There is no need to re-load or manually refresh the termbase – the next time anyone searches or when the source text contains that term, the system will detect it using the updated data. This real-time update behaviour ensures that the latest approved terms are always in use, even in the middle of a project. For example, if a translator adds a corrected translation for a term, their colleagues will immediately see that term highlighted with the new translation in the very next segment they translate. Similarly, any newly entered terms show up in AutoSuggest/term hints without delay. GroupShare's centralized architecture is designed for team collaboration, so newly added translations can be shared instantly and seen by all users of the system – this applies not only to TM segments but also to terminology entries. The benefit is a consistently up-to-date terminology across the team, improving coherence and compliance with client glossaries or style guides.

11.5 High Performance and Responsiveness

Basic user operations in GroupShare are near-instantaneous, thanks to an optimized server architecture and indexing system. Common actions such as opening or closing a segment, confirming a translation, performing a TM lookup or term search, and retrieving matches happen with minimal latency. GroupShare's TM engine is built to handle large databases efficiently; it performs indexing and background tasks without interrupting the user's work, so lookups remain fast. In fact, continuous performance improvements have been a focus in recent releases – for example, an update to GroupShare significantly optimized TM lookup speed (by ~20%) and sped up segment confirmation operations. This means translators see matches from the TM appear almost instantly as they navigate from one segment to the next. Term searches and concordance queries are likewise designed to be very responsive, even when searching extensive resources. GroupShare's recent move to a modern .NET 8 infrastructure has further boosted overall performance and stability, ensuring that the platform can handle multiple concurrent users and large projects without slowdowns. For the end user, this translates into a smooth, real-time experience where the software keeps up with their pace: segments open promptly, suggestions from TM/TB populate immediately, and there's no notable lag in day-to-day translation tasks.

11.6 Accessible and Configurable Interface

The interface can be configured to suit user preferences in terms of appearance and interaction. Translators can adjust the font size and colours used in the translation editor to improve readability or meet their visual needs. For example, Studio allows users to customise the editor display, including changing the font type/size for source or target text and the highlight colours for matches. There is even a quick "*Font Adaptation*" feature to scale text up

or down on the fly for comfort. These options make the environment adaptable for users who may require larger text or higher contrast.

In addition, Trados Studio and GroupShare Online Editor support a wide range of keyboard shortcuts for essential operations, enabling power users to work efficiently without relying solely on the mouse. Virtually all key actions – such as opening, closing or navigating segments, confirming translations, inserting terms, and merging segments – have dedicated shortcuts. For example, a shortcut can be used to merge selected segments or to copy the source text to the target field, eliminating the need to navigate through menus. Many of these shortcuts are also customisable, allowing individuals to adapt them to their preferred workflow. The availability of shortcuts for functions such as “Increase/Decrease Font Size,” “Merge Segments,” “Go to Next/Previous Segment,” and “Add New Term” highlights the system’s emphasis on efficiency and accessibility in its design.

Finally, because GroupShare includes a web-based editor as part of its solution, it also allows cross-platform accessibility – users can translate on Windows or Mac (or even tablets) via a browser, with a simplified interface that still provides essential functionality (font zoom, shortcut keys for confirming segments, etc.). In summary, the UI can be configured to user needs and offers the tools (like adjustable display settings and keyboard shortcuts) for a comfortable, accessible translation experience for all users.

11.7 Integrated Quality Assurance

Trados Studio and GroupShare Online Editor offer a robust, integrated quality assurance tool within their collaborative translation environment, allowing quality control to be seamlessly embedded in the translation process. The system automatically flags common errors such as numeric mismatches, inconsistent translations of identical source text, and empty or missing target segments. These automated QA checks run in real time as translators work, with issues highlighted immediately at the segment level, and can also be executed as a comprehensive verification step after translation to ensure that all content meets quality standards. QA settings are fully configurable, enabling the creation of custom QA profiles and rules (including language-specific checks) to align with project-specific quality requirements. This approach ensures that error detection and consistency checks are integrated throughout the workflow, supporting accurate and high-quality translations.

12 Frequent Asked Questions about TTN TMS

12.1 How can clients use TTN TMS?

TTN TMS is accessed through a secure client portal where accounts can be created self-service or provisioned during a batch migration. Translation requests are submitted in a simple three-step flow (select target language, upload files, choose a deadline). Immediately after upload, the system produces an instant quote and proposes up to seven feasible delivery options, calculated from text volume and real-time linguist availability, with unrealistic deadlines flagged before submission. After confirmation, TTN TMS automatically creates the project, converts files into the required CAT formats, and applies the configured workflow. Where a new language pair is introduced, the platform creates the required translation memory and termbase from templates and binds them to the project, ensuring linguistic assets are built and maintained as part of everyday operations.

Every project is captured in a searchable translation archive. Source and target content is converted to HTML for full-text indexing, enabling fast keyword search across past work, side-by-side viewing of source and target, and quick retrieval of deliverables and related assets such as instructions, XLIFF files, or documentation. Access is controlled through client profiles and archive groups, enabling company-wide reuse where appropriate while keeping sensitive departmental content restricted. Direct access to translation memories and termbases provides transparency and supports consistent terminology governance across projects.

Production can run in Autopilot mode, where TTN TMS orchestrates job routing end-to-end. Predefined translator and proofreader teams are invited automatically based on priority rules, with rapid escalation to backup resources when the first-choice linguist is unavailable or unresponsive. Routine steps such as assignment, handover from translator to proofreader, and final delivery are automated, while Translation Managers focus on oversight and exception handling and receive immediate alerts when attention is required. Translators and reviewers work with live translation memory matches and termbase recognition to reinforce consistent terminology and style, and final files can be delivered automatically with full traceability via dashboards and notifications. In day-to-day operations, around 98% of routine cases are handled through standard web forms, while each completed project enriches the archive, translation memories, and terminology for future reuse.

12.2 How can organizations with their own translators use TTN TMS?

TTN TMS is not only a service for outsourced translation programmes; it is also available as a platform for organizations that work with their own translators and proofreaders. In this mode, TTN TMS operates as a secure, customizable SaaS platform or as an on-premise installation designed to support in-house language teams. Organizations receive a dedicated instance of the same system used by TTN, configured to match operational requirements. Employees and external translation partners log into a dedicated portal to manage projects in a structured, traceable way, while the organization retains control over workflows, responsibilities, and the people involved. TTN configures the environment and can brand the interface with the organization's logo and visual identity, creating a white-labeled experience that feels like an internal enterprise tool rather than a third-party service. This approach is particularly suited to enterprises and institutions that require a high level of control and confidentiality. Core roles such as Client, Translator, Proofreader, and Translation Manager can be adapted to the organization's structure, and specific team members can be assigned as project managers or

reviewers with tailored permissions. Custom roles and permission sets ensure that each participant sees only the projects, assets, and actions relevant to the assigned responsibilities. This flexibility allows TTN TMS to align with a wide range of workflows, whether requirements include regional offices submitting requests, subject-matter expert review steps, or other organization-specific approval and delivery processes. In practice, TTN TMS becomes the organization's internal translation management portal, while TTN provides the technical foundation, configuration, and ongoing support.

During rollout, TTN typically remains a close implementation partner and provides training and onboarding so that translation managers, translators, and proofreaders become productive quickly. Linguists learn how to use the TTN TMS translation interface, leverage translation memories and termbases effectively, and take advantage of integrated tools such as the online editor and supported CAT tool connections. TTN's operational experience also supports best-practice guidance beyond software usage, including how to manage revision cycles, terminology updates, and consistent workflows across teams. In addition, the platform can be configured to use AI-assisted translation suggestions, automated quality checks, and integrated machine translation where appropriate, aligned with organizational policies and preferences. The result is a significant productivity uplift: routine tasks such as project setup, file-format handling, and initial analysis are automated by the platform, enabling translators to focus on linguistic work and reviewers to focus on quality rather than file administration and email coordination. TTN TMS is designed for efficiency, and the workflow automation reduces administrative overhead by automatically managing project progression, notifying the next linguist when a task is ready, and leveraging translation memory content to populate repetitions and reuse. This increases throughput and shortens turnaround times for internal requesters, while maintaining human oversight and the ability to intervene whenever needed.

A major advantage of operating TTN TMS as a private platform is stronger ownership and control of translation data and linguistic assets. Unlike cloud-only solutions, TTN TMS supports flexible hosting models to meet IT security and data-residency requirements. Operation can be delivered as a cloud service, deployed fully on-premises within the organization's own data center, or implemented as a hybrid setup. TTN has extensive experience with high-security deployments, including environments designed to keep sensitive data outside U.S.-controlled cloud infrastructure where Cloud Act exposure may be a concern. In practice, a cloud deployment can keep data within Switzerland under strong data protection standards, while on-premises deployment keeps content behind the organization's firewall. Hybrid approaches are also possible, for example maintaining sensitive translation memories and archives on local infrastructure while using cloud-based components for selected services. This focus on localization, confidentiality, and access control is particularly relevant for government agencies, financial institutions, and any enterprise handling sensitive documents or regulated content. The platform delivers the convenience of a modern web-based TMS without compromising governance and compliance requirements.

In summary, organizations running TTN TMS with internal translators gain a state-of-the-art translation management hub on their own terms. The solution combines TTN's automation capabilities and AI enhancements with a branded, role-based environment that follows organizational rules and processes. Translation teams become more efficient and consistent through centralized translation memories and termbases that grow with each project, while internal stakeholders submit and receive translations through a standardized, trackable process. Management retains visibility and control through dashboards, workflow status

monitoring, and exception notifications. TTN supports the programme with initial training and can continue with technical support and optional quality assistance as needed, while daily operations remain firmly under organizational control. This partnership model enables enterprises to scale multilingual communication efficiently, reduce manual project management work, enforce consistent quality standards across languages, and protect multilingual assets within the organization’s own ecosystem.

12.3 What file formats does TTN TMS support?

TTN TMS supports 58 file formats compatible with Trados Studio. Typical formats include Microsoft Word, Microsoft Excel and Microsoft PowerPoint for translation, with PDF supported for indexing/alignment. For translation, files are converted into SDLXLIFF and then reconverted into their native format, so the translation output file format is the same as the input file format.

12.4 How are PDF files handled in TTN TMS?

PDFs are treated as a special case. Although text can be translated directly by Trados, in most cases it is preferable to convert PDFs into Word. TTN TMS distinguishes between scanned PDFs and digital PDFs. Digital PDFs are generated from digital sources (for example, Word, InDesign or CAT tools); their text is already selectable and editable, so no OCR is needed. TTN TMS converts all PDF files automatically into Word files using Abbyy FineReader.

Pdf to Word Unreliable Files scanned with OCR

Order No: 1_75037 Order Name: ZNET-DM2L4C_TR_05936 Pdf Word Cnt: 10 438 Docx Cnt: 5 852 TR Auto Delete Download Refresh Create Unreliable Docx Return Anonymize Preview Send to TR

No	Type	Status	File Name	Ext	Lang	Chars	Words	Pages	Bytes	Add Date	Up	Dn	Del
1	Translation	CI Sent	ZNET-DM2L4C_TR_05936	.pdf	ES	91 854	10 438	1	7 729	03.10.25 13:10			
18	Unreliable_Docx	None	1_75037_1_POL_Unreliable	.docx	ES	867	150	1	184 587	03.11.25 12:11			
2	Translation	CI Sent	ZNET-DM2L4C_1_TR_05936	.pdf	ES	514 122	150	1	514 122	03.10.25 15:10			
19	Unreliable_Docx	None	1_75037_2_POL_Unreliable	.docx	ES	3 838	621	2	514 122	03.11.25 12:11			
3	Translation	CI Sent	ZNET-DM2L4C_2_TR_05936	.pdf	ES	633 970	150	1	633 970	03.10.25 15:10			
20	Unreliable_Docx	None	1_75037_3_POL_Unreliable	.docx	ES	3 999	612	2	633 970	03.11.25 12:11			
4	Translation	CI Sent	ZNET-DM2L4C_3_TR_05936	.pdf	ES	493 063	150	1	493 063	03.10.25 15:10			
21	Unreliable_Docx	None	1_75037_4_POL_Unreliable	.docx	ES	3 401	572	2	493 063	03.11.25 12:11			

Figure 75: Automatic conversion of PDF files into Word

Scanned files are proposed as “unreliable Docx” files because OCR can introduce errors—for example, the figure “0” may be misinterpreted as the letter “O”, and pictures or logos can be interpreted as words—so the translator must compare the final translation with the original PDF and cannot rely solely on the converted Word file. Digital PDFs are proposed as “Binding PDF”; during conversion, the layout can be deformed, and the translator or the Translation Manager must check the layout before the file is sent to the client.

12.5 Will the translated document maintain the original formatting?

In general, the translated document maintains the original formatting—fonts, styles, layout, hyperlinks, and header/footer/endnote structures. For Microsoft Office files, Trados replaces the text within the underlying XML and typically does not alter the format. In some cases—particularly PowerPoint, or when translating from English into languages such as Spanish or French where text expansion of around 20% is common—minor layout adjustments may be required because longer text can overflow or disappear behind images. In all cases, the translator can upload the formatted native file together with the XLIFF file; the XLIFF is used only to update the translation memories.

In most situations, Office files—especially Word documents—auto-adjust formatting, and even complex files with footnotes, endnotes, and several hundred pages are handled without problems.

12.6 What is the maximum file size supported by TTN TMS?

TTN TMS supports the upload of large files. The current file size limit is 2.1 GB, which is a theoretical maximum and is rarely reached in practical use.

12.7 How does TTN TMS handle backup and security?

TTN TMS retains project files long-term and operates a multi-layer backup strategy designed to protect data even in the event of malware incidents. Files are not deleted; even items older than thirty years are preserved. A multiple-backup system is in place, with some backups kept offline so that, even in the case of a complete virus attack, files remain protected.

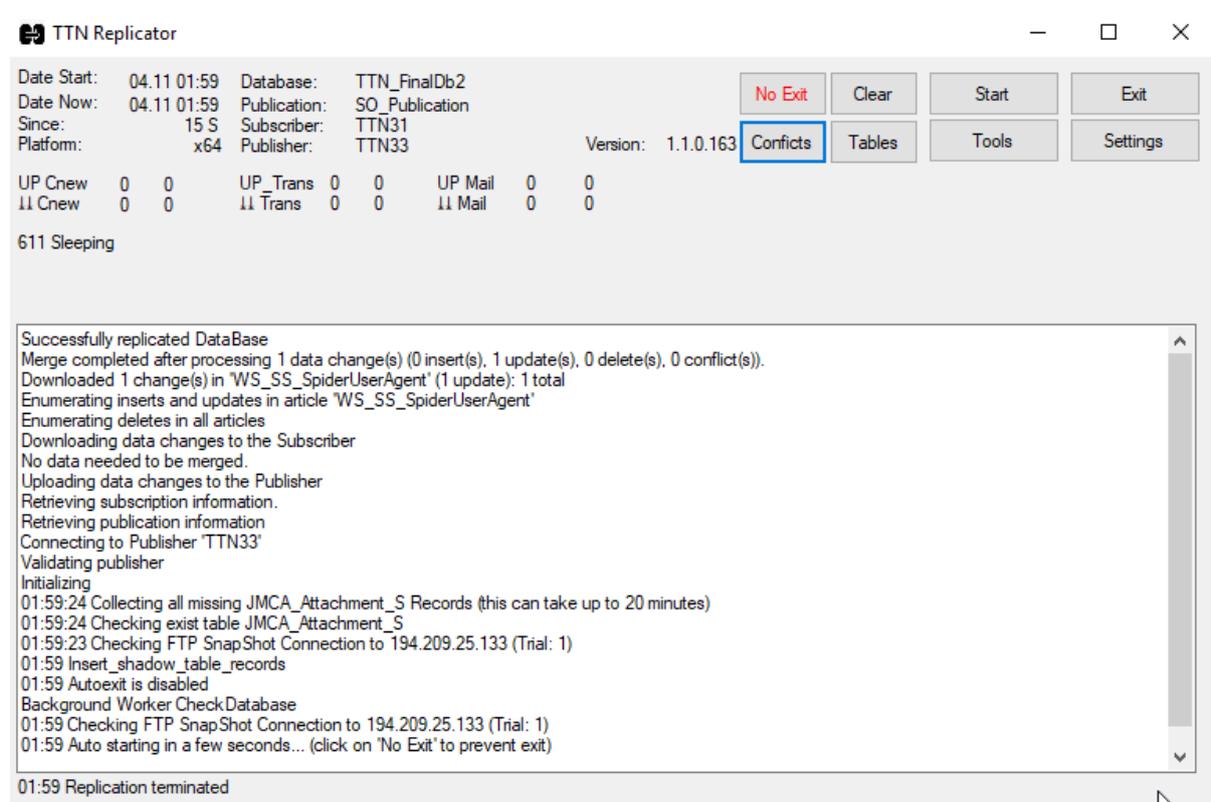


Figure 76: Replication runs frequently and pulls all important data offline

Translation files and client assets (for example, Word or HTML files containing JavaScript) may carry dangerous viruses. Even with virus scanners, complete protection cannot be guaranteed against AI-enabled trojans designed to destroy or encrypt data. To mitigate this risk, all hardware components are mirrored and data is backed up regularly. The database and all project files are replicated several times per day, and backup drives are taken offline so that not all storage media are physically connected at the same time. This architecture makes total data loss practically impossible.

12.8 How is 24/7 server uptime guaranteed?

The entire system is mirrored, and all data is replicated several times a day. In the event of a complete system failure, operation is switched over to a replication server.

Each application involved runs as a TCP/IP service. The components monitor one another through periodic TCP/IP requests. If a component becomes unresponsive or crashes, the monitoring system detects the problem within minutes and automatically sends an SMS to the system operator on duty. This combination of replication, automatic failover and active monitoring ensures high availability and reliable 24/7 operation.

12.9 In which languages is TTN TMS available?

The user interface is available in 62 languages. Currently, only four of these languages are translated by human linguists; all others are machine-translated.

System Translator Interface

Source Language:  English Target Language:  French

MachineTranslated:	0	MachineTranslationError:	0
ManualTranslated:	2 186	ManualProofed:	0
MissingTranslation:	0	Total:	2 186

Improve tokens by Hit Frequency
Re-translate or improve Machine translated tokens online.

Download and upload files with translation tables

Test and improve interface by using the Edit button
The Edit button appears on the top of most pages and allows context sensitive enhancements.

Select User Type:

Figure 77: System translator interface

TTN TMS includes a system translator interface that allows both the client and translator interfaces to be translated into any language. Translators can edit and overwrite the forms in real time and simulate functions to view the text in context. The entire interface text can be downloaded and uploaded as a bilingual Excel file.

The Translation Manager interface is available only in English.

12.10 Can TTN TMS be used without any third-party software?

Translators have four options for translating files: the GroupShare online editor, Trados Studio using project packages, Trados Studio connected directly to the GroupShare server, or bilingual review files. Trados Studio is paid software; the Freelance perpetual licence typically costs about €700–€770. Most freelance translators have their own version of Trados Studio and connect directly to the GroupShare server.

A translator may also use the GroupShare online editor, which costs around €1,100, but this is included as part of the TTN TMS system. It requires no software installation on the translator's or proofreader's computer. The online editor is easier to use, but it offers fewer features than Trados Studio.

12.11 How can the system be operated cost-effectively for large organizations?

Large organisations such as NGOs with dozens or even hundreds of translators and linguistic specialists can purchase a limited number of concurrent online licences for the GroupShare server.

Based on established best practices, a user base of approximately 100 linguists typically requires only around 30 concurrent licences to cover about 98 percent of normal usage, while still allowing for occasional peak demand. As a result, using the online editor with concurrent licences is significantly more cost-effective than purchasing an individual licence for each user.

13 FAQ about Translation Memories

13.1 Are there any limits for TM or TB size?

The number of segments in a translation memory is limited only by available storage space, which can be expanded dynamically.

13.2 How is access to TMs managed?

TTN TMS provides dynamic access rights that are automatically granted and revoked as needed. All users can access MultiTerm Online; however, clients typically have read-only permissions, while translators have read/write permissions. Access rights are verified and assigned automatically when an order is allocated to a translator or proofreader.

13.3 Is it possible to adapt TM fields for special use?

In legal or technical translations—such as construction standards—it is often useful to add custom fields, for example a reference number or a link to the relevant article or norm. In such cases, the structure of the translation memory must be extended with mandatory custom fields.

Trados GroupShare supports translation memories with rich metadata. Each TM entry contains the source segment, target segment, and any number of custom fields defined by the organisation. These custom fields are fully supported in the GroupShare interface and APIs: they can be created through field templates, viewed and edited in the TM editor, and used as filter or search parameters.

13.4 How is search performed in translation memories?

How are “exact match” and “fuzzy match” searches handled, and how is it ensured that search works accurately in all languages?

Trados GroupShare server-based translation memory component fully supports both exact-match and fuzzy-match search modes for segment lookup. Exact-match search retrieves only 100% identical source segments, while fuzzy-match search returns similar segments together with a similarity score. The TM search engine uses robust fuzzy-matching algorithms to calculate match percentages, indicating how closely a new segment corresponds to an existing translation unit. This ensures comprehensive and accurate search results, as even partial matches are identified and presented with their relevance score.

All compulsory fields and metadata associated with each translation unit are available in the TM search results. Each hit displays the source and target segment together with the required metadata fields, including custom fields marked as mandatory and standard system fields such as creation date or author. The same search mechanisms apply to all languages supported by the system, ensuring consistent behaviour across multilingual content.

13.5 How does TTN TMS detect previously translated segments?

TTN TMS automatically detects previously translated segments and suggests them for reuse whenever a matching source segment is opened. The system finds both exact and fuzzy matches in the TM, presents each suggestion with contextual details and highlights any differences for partial matches, allowing the translator to easily choose and insert the preferred translation, which is clearly marked as coming from the TM.

- **Automatic match insertion:** The proposed system automatically detects any previously translated segments in the TM (both exact 100% matches and fuzzy partial matches). When a translator opens a new source segment, the TM is searched and the best matching translation is immediately inserted into the target segment. This ensures that translators reuse existing translations whenever possible, with no manual lookup needed for each segment.
- **Multiple match browsing:** If more than one TM match is found for a given source segment, the interface displays all the matches (along with their match percentages) for the user's reference. The translator can easily browse through these suggestions and choose which one to use. For example, the system lists matches in the Translation Results pane and allows the user to insert an alternate match instead of the top-ranked one. This gives the user full control to pick the preferred translation when multiple options exist.
- **Match metadata visibility:** For each TM result, the system provides additional context and metadata about the match. The translator can see information such as which TM the match came from, and other attributes like the original document or file name if available. This metadata is displayed alongside the match entry, helping users assess the origin and reliability of each suggestion.
- **Highlighted differences for partial matches:** When a stored translation is only a partial match to the new source segment, the system clearly highlights all differences between the source text and the TM suggestion. Any words or phrases that differ are indicated in the comparison (for example, with added text underlined in one colour and deleted text shown with strikethrough in another colour). This lets the translator immediately see what changes are needed, as differences are presented in a "track changes" style for easy identification.
- **Clear marking of inserted TM content:** Segments that have been pre-filled or inserted from TM matches are visibly marked in the editing environment. For instance, an icon or badge in the segment's status column denotes that the content came from a TM match and even shows the match percentage. This way, translators and reviewers can instantly recognize which target segments were populated from the TM (and at what match level), ensuring transparency. Once the translator edits or confirms the segment, the indicator updates accordingly to show that the translation has been reviewed, while still retaining the original match information for reference.

All of these features are fully supported by TTN TMS's translation memory component, ensuring that previous translations are leveraged efficiently while giving translators full control and visibility. This TM matching mechanism not only increases productivity by reusing existing translations but also provides translators with clear information and options to maintain translation quality and consistency.

13.6 How does TTN TMS integrate Machine Translation with TM?

TTN TMS seamlessly combines advanced Machine Translation (MT), Translation Memory (TM), and terminology management into a unified workflow. This integrated approach enables the use of both human-reviewed translations and AI-generated suggestions. The result is higher-quality output with reduced effort, delivered through intelligent automation that accelerates projects without compromising accuracy.

- **Automatic MT suggestions when no TM match:** When a new segment has no existing TM match, TTN TMS automatically provides a machine translation suggestion. This suggestion can be inserted directly into the target text or presented for review, ensuring

that the translator does not start from a blank page. Even when the translation memory contains no entry, an initial draft translation is always available, reducing manual effort and saving time.

- **MT suggestions alongside TM matches:** TTN TMS does not rely on a single source of suggestions. When a fuzzy or exact TM match is available, the system can retrieve a parallel MT suggestion and display it alongside the TM result. This side-by-side presentation allows linguists to select the most appropriate option or combine elements from both suggestions. By presenting MT and TM results together, the platform increases translation quality and flexibility while continuing to benefit from existing translations and recent AI translation improvements.
- **Integration with custom MT engines (Azure, DeepL, etc.):** The solution is engine-agnostic and vendor-neutral. TTN TMS integrates with leading MT providers such as Microsoft Azure Translator, DeepL, and other AI services, including GPT-based engines such as ChatGPT. Custom-trained models can also be connected via API. This flexibility enables the use of preferred machine translation engines to generate higher-quality suggestions. As new MT technologies emerge, they can be integrated seamlessly, ensuring long-term adaptability and continued access to state-of-the-art AI translation capabilities.
- **Conversational AI for Context and Terminology:** TTN's conversational AI layer adds an additional dimension to translation productivity. Traditional translation memory systems and terminology databases often struggle to operate optimally together; for example, a fuzzy TM match may not automatically incorporate approved terminology. The GPT-based conversational AI layer addresses this limitation by intelligently combining TM matches with approved terminology in context, generating refined translation suggestions that respect both sentence context and terminology constraints.

By leveraging advanced GPT-based AI within TTN TMS, the system analyses each segment together with relevant TM fragments and required glossary terms to produce fluent translations that seamlessly integrate these elements. The resulting output is not a generic machine translation, but a suggestion informed by existing translations and established terminology, assembled through an AI-driven process that accounts for nuance and context. This approach frequently outperforms traditional MT engines in terms of accuracy and consistency.

The conversational AI layer significantly reduces the need for repeated terminology corrections or manual reworking of fuzzy matches. Translators receive high-quality draft translations that already comply with glossaries and style guidelines, thereby reducing post-editing effort. Overall, TTN TMS's MT–TM integration, enhanced by an intelligent AI layer, delivers consistent, terminology-compliant translations from the outset while accelerating delivery timelines.

13.7 How are TMs managed?

The translation management system provides comprehensive features for managing translation memories and termbases. It combines automated processes with administrator control to ensure effective and flexible resource management. Key aspects include:

The system automatically handles translation memory and termbase setup based on project language pairs. When a project involves a previously unused source–target language combination, the system generates a new TM and TB using predefined templates and

parameters, ensuring a dedicated resource for that language pair. If an appropriate TM or TB already exists covering the required language pair, the system reuses the existing resource instead of creating a duplicate.

13.8 How do translation managers control termbases?

Administrators or translation managers have full control over all translation memories and termbases. They can manually create, modify, or delete TMs and TBs and adjust their structure (for example, by adding or modifying fields and metadata) and content. The system also supports importing and exporting TM/TB data for backup, migration, or integration purposes, giving the organization flexibility in managing linguistic assets.

Translation Memories

Name	CAT	Type	Src	Source	Trg	Target	Description	Created	TUs	Del
TTN_SLF_deDE_enGB		Trados		German		English	WSL Institute for Snow and Avalanche Research SLF	08.10.2025	10 654	
TTN_SLF_deDE_frFR		Trados		German		French	WSL Institute for Snow and Avalanche Research SLF	08.10.2025	95 806	
TTN_SLF_deDE_frFR_Keybot		Trados		German		French	WSL Institute for Snow and Avalanche Research SLF	08.11.2025	1 248	
TTN_SLF_deDE_itIT		Trados		German		Italian	WSL Institute for Snow and Avalanche Research SLF	08.10.2025	99 768	
TTN_SLF_deDE_itIT_Keybot		Trados		German		Italian	WSL Institute for Snow and Avalanche Research SLF	08.11.2025	29 970	
TTN_SLF_enGB_deDE		Trados		English		German	WSL Institute for Snow and Avalanche Research SLF	12.10.2025	72	
TTN_SLF_enGB_itIT		Trados		English		Italian	WSL Institute for Snow and Avalanche Research SLF	12.10.2025	267	
TTN_SLF_frFR_itIT		Trados		French		Italian	WSL Institute for Snow and Avalanche Research SLF	12.10.2025		

Create Translation Memories

Src	Source	Trg	Target	Orders	Files	Chars	First	Last	Trados
	German		French	4	38	160689	08-08-2017	13-12-2021	
	German		Italian	0	35	155903	08-08-2017	13-12-2021	
	German		English	35	35	121882	08-08-2017	13-12-2021	
	French		German	1	1	5170	01-12-2020	01-12-2020	<input type="button" value="+ Create"/>
	French		Italian	0	1	4821	01-12-2020	01-12-2020	
	French		English	0	1	4589	01-12-2020	01-12-2020	<input type="button" value="+ Create"/>
	German		English	0	0	0	16-11-2026	21-11-2016	<input type="button" value="+ Create"/>
	English		German	0	0	0	16-11-2026	24-04-2023	

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Figure 78: Create TM with TTN TMS manually based on a predefined template

Structural Adjustments via GroupShare: If a translation memory requires advanced structural changes beyond the default template (for example, adding custom fields), a translation manager or system operator can connect directly to the underlying TM server (for example, an SDL Trados GroupShare server) to apply these modifications. This approach ensures that specialized configurations can be implemented even if it requires using tools beyond the default web interface.

Create Translation Memory

Name *

Description

Copyright

Location *

Container *

Figure 79: Create TM with special field directly on the GroupShare server

In summary, the system automatically handles translation memory and termbase management by creating or reusing resources as needed for new language combinations, while still allowing administrators to perform detailed oversight and customization when necessary. This ensures that enterprise clients benefit from both efficiency through automation and flexibility through administrator control in TM and TB management.

13.9 How does GroupShare allow sharing of translations and terms?

In a TTN TMS environment with SDL Trados GroupShare integration, translation segments and terminological entries saved by one user in a shared translation memory (TM) or termbase become immediately available to other authorized users. GroupShare is a server-based collaboration solution that centralizes translation memories and termbases; when a team member confirms a segment or adds a term, the update is applied instantly for all users with the appropriate access rights. This ensures that the most recent translations and terminology are available across the team without delay, enabling real-time collaboration.

GroupShare achieves this through its centralized TM and terminology database. As soon as a translator saves a new translation unit or a term, it's stored on the server and can be retrieved by others right away. For example, if one translator confirms a new translation for a segment, any colleague who later encounters that same source text will immediately see the translation as a 100% match from the TM. Similarly, if a user adds a term to the shared termbase, others will see it appear instantly as a recognized term in their translation tool. This immediate synchronization ensures all team members are always working with the most current translations and agreed terminology.

By providing real-time updates to the shared TMs and termbases, GroupShare helps maintain consistency and facilitate teamwork. All users are effectively working with the same up-to-date set of approved translations and terms in one secure, unified environment. This not only improves the overall consistency and quality of the translations, but also makes collaboration between translators and reviewers much more efficient, since everyone is leveraging the latest confirmed segments and terminology.

14 FAQ about Termbases

14.1 Are there any limits for TB size?

For MultiTerm databases on the GroupShare server, the maximum number of entries is limited only by the available storage capacity.

14.2 How is access to TBs managed?

TTN TMS provides dynamic access rights that are automatically granted and revoked as needed. All users can access MultiTerm Online; however, clients typically have read-only permissions, while translators have read/write permissions. Access rights are verified and assigned automatically when an order is allocated to a translator or proofreader.

14.3 Is it possible to modify the TB structure for special use?

In most situations, a glossary containing only the source and target term is sufficient. However, in specialised domains such as medical translation it is often essential to extend the termbase with additional fields. For example, a simple bilingual glossary might contain only the entry “*angioplasty – angioplastie*” (English – French). By adding extra fields, the same entry can hold much richer information. A Definition field can describe the concept, for instance: “*A surgical procedure to restore blood flow through an artery by inflating a tiny balloon.*” A Reference or Source field can indicate the origin of this definition, such as “*World Health Organization guidelines (2021).*” A Context field can store a typical usage example: “*The patient underwent angioplasty to open the blocked artery.*”

With these fields in place, translators immediately see the precise meaning of the term. The definition explains the concept in clear language, which is crucial in cases where ambiguity is possible. The reference field points to an authoritative source or standard, increasing confidence in the information. This reduces the risk of errors and helps ensure that all translators use the term consistently.

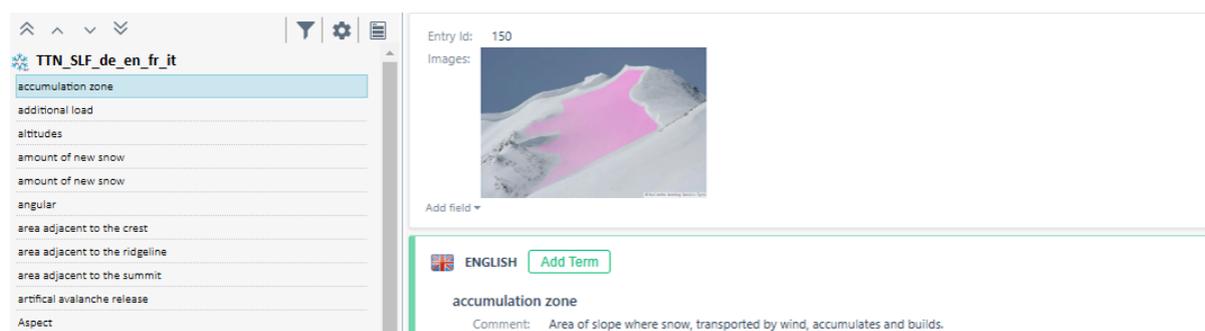


Figure 80: Termbases with comment and image

In other disciplines, such as meteorology, an image of a specific cloud type may be useful, while in nivology an image of an avalanche or a particular snow type can be invaluable. All these features are fully supported by MultiTerm. Fields such as Source, Notes, Definition, Reference, Context or Image can be added to the termbase definition, marked as mandatory via an input model, and made visible and actionable in the user interface. They can be displayed in custom layouts and used for filtering and searching by all authorised users working with the server-based termbase.

14.4 How is search performed in termbases?

For terminology management, Trados GroupShare (via MultiTerm Server) likewise fulfils all search requirements. The system offers both exact-term lookup and fuzzy-term search in termbases, allowing entries to be found either by exact matches or by terms with slight spelling or wording variations. MultiTerm search can be configured to retrieve terms even when the query is not an exact match, using fuzzy matching to identify similar terms and returning them with a relevance score. This ensures that no relevant term is overlooked, even when the query contains minor differences or typos.

All defined fields of a term entry are displayed as part of the search results or when viewing an entry, including all compulsory fields such as term, translation, definition, context sentence and usage note.

14.5 How are termbase entries recognized and displayed?

In the translation environment, terms from connected termbases (TBs) are automatically recognized and clearly marked within the source segment. This ensures the translator can immediately access each term's complete entry and view all required information at a glance. The system's terminology component provides comprehensive support for terminology detection through features such as:

- **Automatic Term Detection:** Terms stored in the termbase are automatically identified when they appear in the source segment.
- **Visual Term Highlighting:** Each detected term is clearly marked (highlighted) within the source text for easy visibility to the translator
- **Quick Term Entry Access:** Users can quickly access the full termbase entry for any highlighted term directly from the interface (for example, by hovering over or selecting the term), immediately revealing all associated term details.
- **Full Field Visibility:** All mandatory and custom fields linked to each term (such as source references, definitions, and usage notes) are displayed as part of the term's entry information, ensuring the user can view all relevant term data within the environment.

14.6 How are termbases managed?

The translation management system provides comprehensive features for managing translation memories and termbases. It combines automated processes with administrator control to ensure effective and flexible resource management. Key aspects include:

The system automatically handles translation memory and termbase setup based on project language pairs. When a project involves a previously unused source–target language combination, the system generates a new TM and TB using predefined templates and parameters, ensuring a dedicated resource for that language pair. If an appropriate TM or TB already exists covering the required language pair, the system reuses the existing resource instead of creating a duplicate.

15 FAQ on Secure Handling of Secret PDF Documents

Top-secret or highly sensitive documents – such as scanned medical reports with handwritten notes, government files with stamps and seals, or any PDF that cannot be safely machine-processed – are handled within TTN’s closed system. The translator works directly on TTN’s secure server via a web interface or remote desktop, so they never download or keep a local copy of the file. TTN-TMS offers three secure solutions to accommodate different types of documents and translator needs:

15.1 Web Translation Editor (Simple Mode)

This is a lightweight online editor (built with Telerik UI components) ideal for small documents or short texts. The translator accesses a web page with two adjustable panes: one pane displays the original PDF and the other provides an input area for the translation. The interface is designed to be extremely easy to use, even for a translator who has never seen it before.

There is no complicated setup required – translators can start translating immediately in their browser, even on a tablet or large smartphone. The editor provides essential features like spell-checking in over 160 languages, but it blocks any attempt to download or print the source text. Printing is only possible by taking screenshots (which cannot be entirely prevented), and standard print and save functions are disabled.

This simple editor is perfect for very short texts. In fact, even a two-word document can be translated and submitted in under a minute using this tool. It offers a high level of security with minimal effort, allowing translators to complete micro-tasks with just a few clicks in a fully sandboxed environment.

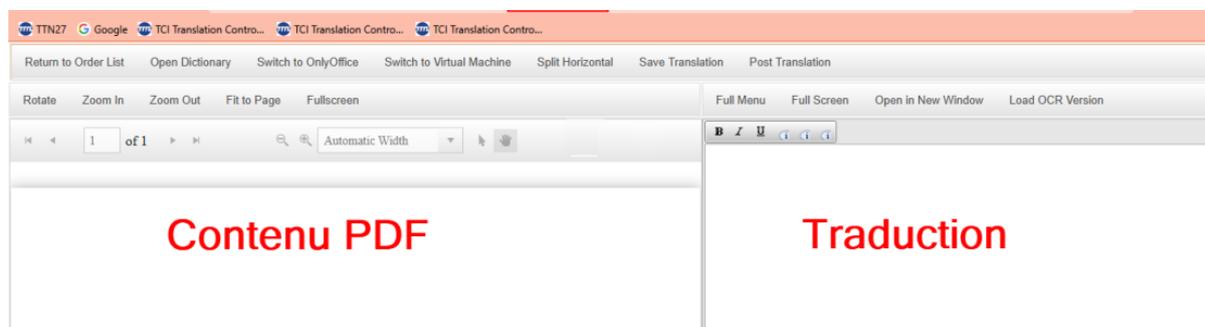


Figure 81: Translator’s web editor with two resizable windows

15.2 OnlyOffice Online Editor (Advanced Mode)

For source documents that are longer or have complex formatting (for example, scanned forms, tables, or official templates that need to be preserved), TTN-TMS integrates an OnlyOffice document editor. OnlyOffice is an open-source office suite similar to Microsoft Word, but it runs in the browser and is hosted on TTN’s own servers behind our firewall. Translators can switch to this editor when the simple mode isn’t sufficient to reproduce the layout neatly.

The OnlyOffice interface is very familiar (its menus and tools mirror those of MS Word), which means new users can find their way quickly. It supports all languages, including right-to-left scripts, and offers spell checkers for all the major languages our clients require. The advantage of this system is that it provides full editing capabilities – the translator can edit text in a Word-like environment – without ever downloading the file.

TTN has integrated OnlyOffice in a way that every user action is controlled. Features that could pose a security risk (such as printing, downloading, or copying large portions of text) are disabled or restricted. OnlyOffice even allows custom plugins, and TTN uses these to automate formatting tasks specific to client needs – for example, automatically inserting headers or adjusting font sizes so that each page of the translation aligns exactly with the corresponding page of the source document. The editor can also be used in a vertical split-screen mode, as illustrated in the figure below.

This advanced online editor gives translators more tools to handle tricky layouts, while still keeping the document within TTN’s secure environment.

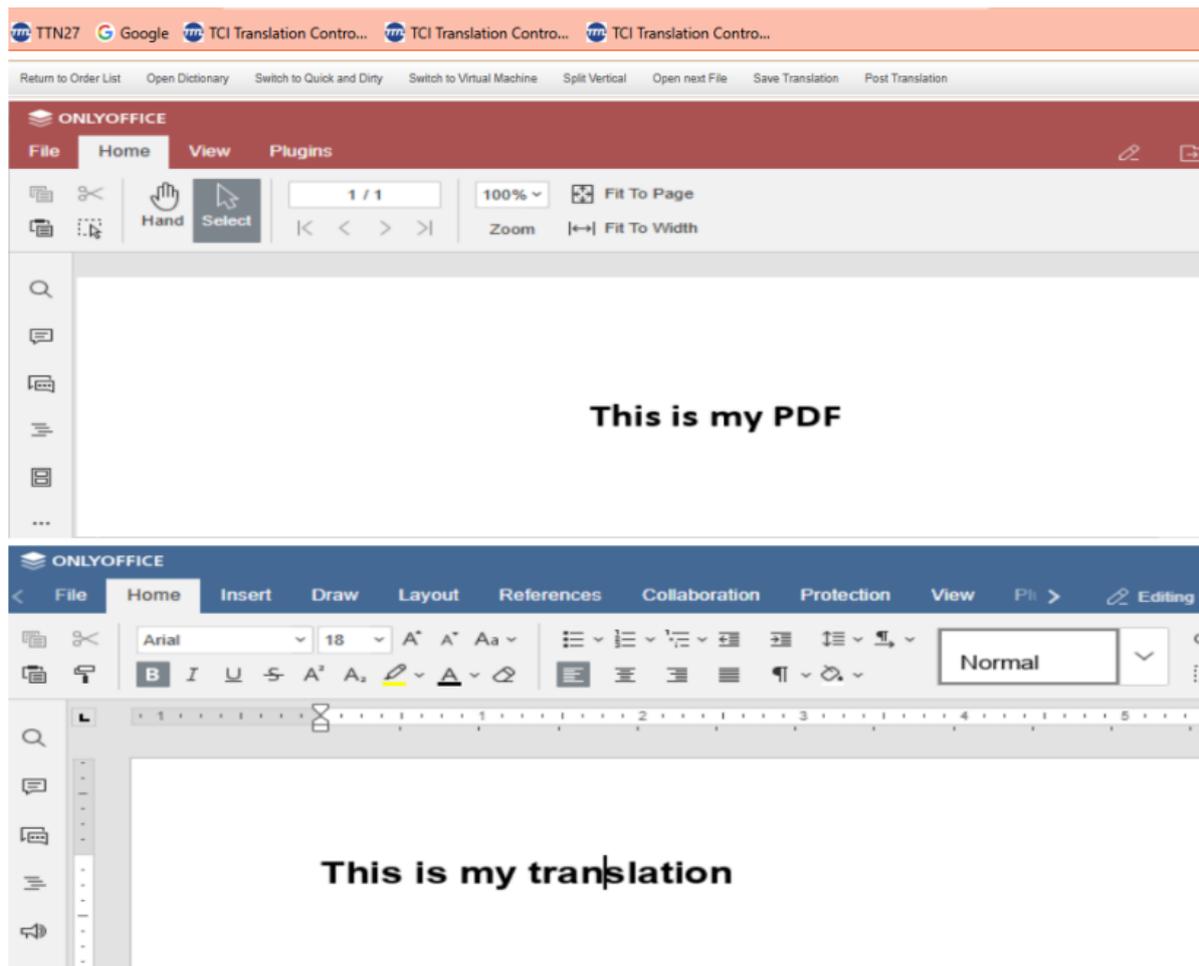


Figure 82: OnlyOffice Document Server integrated within TTN’s infrastructure

15.3 Dedicated Virtual Machine (VM) Environment

For large projects or for translators who work regularly on sensitive texts, TTN can provide a personal virtual machine on our server farm. This is essentially a fully isolated Windows desktop that the translator connects to via Remote Desktop (RDP). Each such VM has a fixed IP address and comes pre-configured with everything the translator needs: the system language is set to the translator’s preference, Microsoft Word is installed with the appropriate spell-check dictionaries, and the translator’s secure access to TTN’s job portal is already set up.

The translator simply downloads a small RDP configuration file from TTN and double-clicks it to launch the secure remote desktop. This one-click access avoids any complicated setup – even someone who is not IT-savvy can connect easily without worrying about technical details. On the VM, translators have the freedom to use more advanced tools or their familiar Word macros if needed, but all files stay on the server. They can only see the files related to their assignment, and they work on those files within the remote session.

The clipboard (copy-paste) is isolated to prevent any text from being copied from inside the VM to a local computer. Likewise, the “Save As” function is disabled, meaning the translator cannot save a local copy of the document outside the secure network drive provided. If any file needs to be opened or accessed, it goes through TTN’s secure file server rather than through a direct download. Each translator’s VM is password-protected and accessible only to that individual. Once a translation job is completed and delivered back to TTN through the platform, the system immediately revokes the translator’s access to those files – they can no longer open them.

For frequent collaborators, having a dedicated VM means they can configure the environment to their liking (for example, setting up custom software or bookmarks) while still adhering to the highest security standards. TTN’s server infrastructure is very robust – we have powerful servers that can host hundreds of such VMs simultaneously, ensuring performance is not an issue. This solution is the most advanced and is typically used for larger assignments or ongoing projects where a translator may need a full desktop environment to work efficiently. It provides maximum security and functionality, equivalent to the translator working in-house on a secure computer.

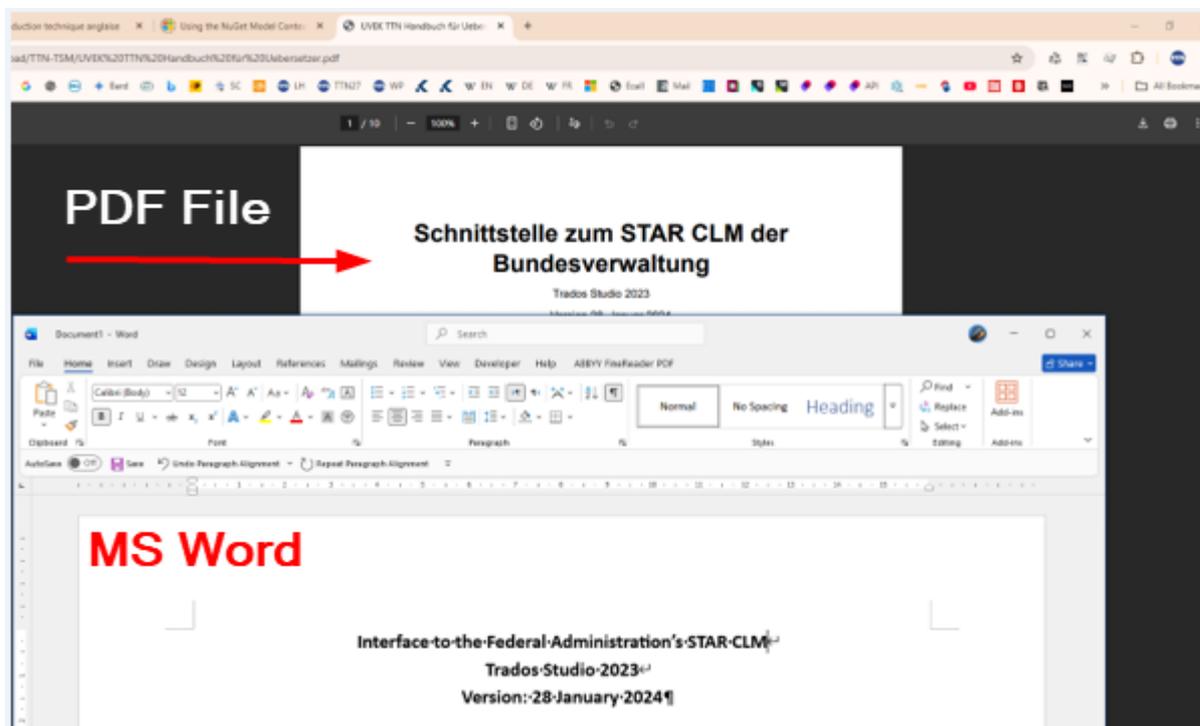


Figure 83: The virtual machine works like a home computer

In summary, all three methods ensure that the translator works within TTN’s secure ecosystem. Translators can choose the method that best fits the task (and their technical comfort level) – and they can even switch between methods if needed. The key point is that at no time is the

confidential document uncontrolled: it remains either on the server or within a secure remote session at all times. This multi-pronged approach allows TTN to handle everything from a two-line certificate to a 100-page report with tables, providing the appropriate balance of security and usability for each scenario.

15.4 Can translators copy, download, or print the documents?

No. TTN-TMS is designed to prevent data from being siphoned out by unauthorized means. In the web-based editors (both the simple web editor and the OnlyOffice editor), typical file options are locked down. Translators cannot download the source file or the translation – there is no “Save as” function to save files to a local disk. The print function is also disabled in the interface (the only way to get a hard copy would be to take manual screenshots, which cannot be entirely prevented, but printing an entire document is not easily possible).

To further protect content, the system restricts how much text can be copied to the clipboard at once. A small script prevents selecting and copying large blocks of text from the web editor – only a short snippet (for example, a sentence or two, up to a certain character limit) can be copied at a time. This makes it impractical for anyone to copy the entire document’s text and paste it outside the secure platform.

On the virtual machine solution, TTN takes a different approach to achieve the same goal. The VM runs on TTN’s servers, and when a translator is connected to it via RDP, the clipboard is redirected or blocked to ensure that no content can be copied from the remote session to a local computer. In essence, a translator can copy-paste text within the remote desktop (for example, between the source PDF and Word on the VM), but not out to their own PC. File transfer channels are closed as well – one cannot simply drag a file out of the VM or use shared drives, unless explicitly enabled for a specific need. Additionally, even within the VM, the option to “Save As” or create new copies of the file outside the designated secure folder is disabled.

Through these combined measures, TTN ensures that all sensitive data stays within the confines of our system. Even if a translator tried to bypass the rules, the platform’s safeguards (and continuous monitoring of user actions) would limit any such attempt. This gives clients peace of mind that their documents won’t be printed on a stray printer or saved on a USB stick – the information remains contained and secure.

```
<script type="text/javascript">
  document.addEventListener('copy', function (e) {
    let selection = window.getSelection().toString();
    if (selection.length > 255) {
      // Limit clipboard content to the first 255 characters
    }
  });
</script>
```

Copy limited to 255 characters

Figure 84: A script limits copy-and-paste operations to a defined number of characters

15.5 Where are the documents stored and who can access them?

All documents are stored on TTN’s secure servers, which are typically located on-premises under TTN’s direct control. TTN does not use public cloud storage for confidential projects – the files never leave our infrastructure. During the translation process, the document is either

displayed through our web interface or opened in a remote virtual machine, but in all cases the master file stays on the server. Only authorized personnel and the assigned translator have access to the content, and even then the access is tightly regulated (for example, a translator can only view the files for the specific job they are working on, and only for the duration of that job).

Our system also complies with strict data protection regulations. TTN's integration of OnlyOffice, for instance, is done in a GDPR-compliant way: the OnlyOffice document server is hosted on-premises behind our firewall, so no data is handed off to any third-party cloud service. OnlyOffice is an open-source platform, which means its code is transparent and has been vetted by the community – there are no hidden backdoors, and we can customize it for maximum security. All communications between the translator's browser (or remote desktop client) and our servers are encrypted using industry-standard protocols. In fact, OnlyOffice itself employs AES-256 encryption for data at rest and TLS/HTTPS for data in transit, ensuring that even if someone intercepted the network traffic, they could not decipher the content. TTN's servers are kept up-to-date and hardened following cybersecurity best practices, and we were early adopters of dedicated internet infrastructure to ensure we have full control over network security.

In practical terms, this means the document's journey is fully contained within TTN's infrastructure. From the moment the client uploads it to our platform for translation, it resides in a secure database; the translator accesses it through a secure session to translate it; and the finished translation is stored and delivered back to the client through the same protected system. No copies ever reside on a translator's personal device, and no unencrypted emails with attachments are sent during the process. TTN-TMS also limits internal access – even within TTN, only staff who need to handle the project (for example, a project manager or a proofreader) can see the files, and even that access is via the secure platform. By keeping storage and processing in-house and encrypted, TTN ensures that all sensitive documents remain confidential and protected from unauthorized access at all times.

15.6 Is this platform easy for translators to use?

Yes – despite the high security measures, we have designed the system to be user-friendly for translators. TTN understands that if a system is too complicated or slows down the translator, it could introduce errors or discourage the best linguists from working on a project. TTN's platform avoids that by offering solutions tailored to the task size and to the translator's technical comfort level.

For very small jobs, the web translation editor interface is extremely straightforward. A translator who has never used TTN's system before can receive a link and start typing the translation immediately. There is no software to install and virtually no learning curve – the web editor is accessible to users familiar with standard word processors.

This ease of use is crucial, for example, when a document is only a couple of sentences long and might not even meet a typical minimum fee. In such cases, translators appreciate being able to complete the work in seconds and move on. The inclusion of features like spell-check and basic text formatting in the web editor helps them work without needing any external tools.

For more complex tasks, the OnlyOffice mode provides a full-featured word processor in the browser. Its interface is modeled on MS Word, so translators feel at home – the menus and

buttons are where they expect them to be. It supports even advanced needs (like tables, text boxes, etc.), allowing translators to edit in a true WYSIWYG (What You See Is What You Get) manner without struggling with workarounds. We have also ensured that the interface language can be changed, so a translator who is more comfortable in French, German, or another language can switch the UI language. These details make the experience smoother and lower the barrier for translators who might be wary of online tools.

For translators handling large volumes regularly, the dedicated VM approach offers even more flexibility than a locked-down company laptop. They get a personal virtual machine where they can install custom spell-checking tools or set up their preferred background resources within the security limits. Many professional translators have their own set of software (such as custom dictionaries, terminology tools, or macros) – on our VMs, they can often use those just as they would on their own PC, except now it's in a secured container. We have automated much of the setup, so the first time a translator uses their VM, it already has everything configured, including the correct keyboard layout and regional settings. Connecting to the VM is also made easy: Windows, Mac, and Linux all support Remote Desktop, and we provide clear instructions. We deliberately avoid technical jargon when guiding linguists; for instance, instead of saying “please configure an RDP client with these parameters,” we simply advise “click this file to launch the secure workspace.” In essence, translators do not need to be IT experts to use TTN-TMS.

The platform has been tested with translators of varying technical skill levels. Those who are tech-savvy appreciate the advanced options (they can seamlessly switch between the web editor and their VM), while those less comfortable with technology can stick to the simple web editor for small jobs. By making the system as simple as possible for the end user, TTN ensures that security does not come at the expense of productivity. Translators can focus on translating, not wrestling with software. This ease of use ultimately benefits clients as well: assignments get completed faster and with less hassle, even when extra security measures are in place.

16 FAQ on Text Anonymization in Translations

16.1 Anonymization Studio

TTN provides an anonymization solution to protect personal and confidential data in documents before translation. Normally, translating sensitive texts (like medical records or legal decisions) with a translation memory is prohibited because it would store personal data that could be accessible to others. If such data were compromised (e.g. via a hack), it could be reconstructed and leaked on the dark web. To prevent this, TTN has developed an anonymization studio that replaces names, numbers, and other identifying details with dummy data or placeholders. This process removes or obfuscates personal information while keeping the document structure intact. Importantly, the original data isn't lost – it can be reverse-engineered later using a secure key-value mapping file that links each placeholder to the original value. This means authorized personnel can restore the real names or numbers after translation, ensuring accuracy without ever exposing the sensitive data during the translation process.

16.2 Which translation projects typically require anonymization?

Anonymization is crucial for any translation project involving personally identifiable or sensitive information. Clients in highly regulated sectors often request this service. For example, medical documents (patient records, lab reports, clinical trial data) and legal texts (court decisions, contracts containing personal details) frequently need to be anonymized before translation. Institutions like hospitals, clinics, courts, and government agencies have strict confidentiality rules and data protection laws to follow (e.g. GDPR in Europe). By anonymizing such texts, these organizations ensure they remain compliant with privacy regulations while still getting the content translated. In short, any document containing names, social security or patient IDs, addresses, financial details, or other private data is a candidate for anonymization to protect individual privacy during the translation workflow. TTN's anonymization solution is designed to serve these needs, allowing translators to work on the content without ever seeing real personal data.

16.3 How does TTN's anonymization process work?

TTN's anonymization studio uses advanced language processing to identify and mask confidential information before translation. The system scans the source text for any personal identifiers – such as people's names, company names, addresses, contact information, patient numbers, dates of birth, etc. – and then replaces each with a neutral placeholder or dummy value. For example, a name like "John Smith" might be replaced with "Person A," or a specific ID number might be replaced with a random dummy number of the same format. These substitutions maintain the same category and format as the original data (so that the text still reads naturally and remains coherent for translation). The key is that no actual personal data remains in the text; it's all been swapped out for fictitious stand-ins.

Once this replacement is completed, TTN TSM generates a key-value mapping file (sometimes referred to as a re-identification key). This file securely stores each original sensitive element together with its corresponding placeholder. The anonymized text can then be safely transmitted for translation or processed by translation memory systems without privacy concerns. After the translation has been completed, the placeholders in the

translated text can be de-anonymized; TTN TSM uses the mapping file to replace the dummy placeholders with the original names, numbers, and details. This process produces a final translated document in which all original information is restored in the correct locations, but only after the translation work has been completed. Throughout the entire workflow, translators and machine translation engines handle anonymized data exclusively, significantly reducing the risk of confidential information leakage.

16.4 What anonymization methods does TTN-TSM offer?

TTN-TSM offers three flexible options to perform text anonymization, catering to different security requirements:

- **Cloud-Based AI (ChatGPT):** The text can be anonymized using the latest version of an AI like OpenAI's ChatGPT. In this mode, the content is sent to a cloud AI service which returns an anonymized version of the text along with the key mapping file. While this method leverages powerful AI for high-quality anonymization, it involves transferring the text to external servers (often in the United States). Important: Many Swiss federal agencies and institutions do not allow this mode because sending confidential data to a U.S.-based cloud could violate data sovereignty (due to laws like the U.S. CLOUD Act). In other words, even though the data is anonymized in transit, simply transmitting sensitive text to an American cloud service is seen as a security risk by Swiss regulators.
- **Swiss Supercomputer "Alps" (Swiss National AI Model):** As an alternative to foreign cloud services, TTN's system can interface with Switzerland's own supercomputing infrastructure. The Swiss national supercomputer, called "Alps," was used to train the country's large public AI model (known as *Apertus* – one of the world's most multilingual open-source LLMs). Through this interface, anonymization can be done using a Swiss-hosted AI model. This approach keeps all data within Switzerland's jurisdiction, avoiding exposure to the US CLOUD Act. The Swiss model is highly capable (supporting over 1,800 languages), meaning it can accurately identify and replace sensitive terms in a wide variety of languages. Using Alps for anonymization ensures that the data is processed on secure, domestic servers with strict privacy controls. It's an ideal middle-ground for those who want the power of AI-driven anonymization without handing data to foreign cloud providers.
- **On-Premises Model (Apertus 8B):** For the highest level of control, TTN can deploy an anonymization model entirely behind the client's firewall. Specifically, a smaller version of the Swiss open-source LLM (such as Apertus 8B, an 8-billion-parameter model) can be operated on local hardware at the client's site. In this configuration, the text never leaves the secure internal network during anonymization; all processing is performed in-house. Although a local model may be slightly less powerful than large cloud-based AI systems, it remains highly effective at identifying personal data and ensures complete data confidentiality, as no information is transmitted over the internet. This option is typically selected by organizations handling extremely sensitive data, such as defense-related or top-secret projects, or by entities subject to strict data-residency requirements. Operating the anonymization tool on-premises ensures that no external party has access to the content, providing a fully self-contained solution.

Each of these methods produces an anonymized text together with a corresponding key file. Clients may select the mode that best aligns with their security requirements and compliance

obligations. TTN TMS is designed as a flexible platform, allowing the anonymization approach to be adapted over time as operational or regulatory needs evolve.

16.5 Does anonymization allow the safe use of translation memory tools?

Yes. Anonymization enables the safe use of translation memory (TM) for confidential texts. Translation memory software stores sentences or segments from source texts together with their translations in a database for future reuse. If raw sensitive documents are processed directly in a TM, all personal data contained in those documents would also be stored, which raises significant privacy concerns. When the text is anonymized in advance, the TM stores only masked placeholders and their translated equivalents, rather than the original personal details. This approach allows the productivity benefits of translation memory to be retained without exposing private information. Data anonymization is therefore considered a recommended best practice for GDPR-compliant machine translation and TM workflows, as it ensures that translation memories contain only anonymized or pseudonymized data and do not allow the identification of individuals.

By using anonymization, translators can confidently leverage TM matches and repetitions in sensitive projects without breaching confidentiality. This is extremely valuable for fields like medicine and law, where documents tend to have a lot of repetitive content. For example, medical reports often reuse standard phrases, terminologies, and boilerplate text. With a translation memory, those repeated segments only need to be translated once, and thereafter the TM auto-fills them in future documents. Studies have shown that using a TM can reduce translation time by around 50% on average, especially for texts with many repetitions (such as technical manuals or legal documents). In the medical domain, it's not uncommon to achieve over 50% cost and time savings thanks to high repetition rates.

In summary, anonymization enables organizations to safely use translation memory and other AI-based translation tools on sensitive data. It mitigates the risk of confidential information leakage while preserving the efficiency gains associated with translation memory reuse. This approach supports faster and more consistent translation through the reuse of existing translations, while ensuring that patient names, client details, and other private data remain protected throughout the entire process.

17 FAQ on server access and user activity logging?

TTN TMS records all server access details using built-in Windows Server and IIS logging. Every request to the system is logged with its timestamp, the originating IP address, and user identification. The logs also capture the specific resource or URL accessed including query parameters to provide context for each action. These comprehensive web server logs are retained for audit and security reviews, ensuring that any access to the system can be traced back to a specific user and location if needed. Unsuccessful access attempts (such as failed logins) are similarly logged for further investigation.

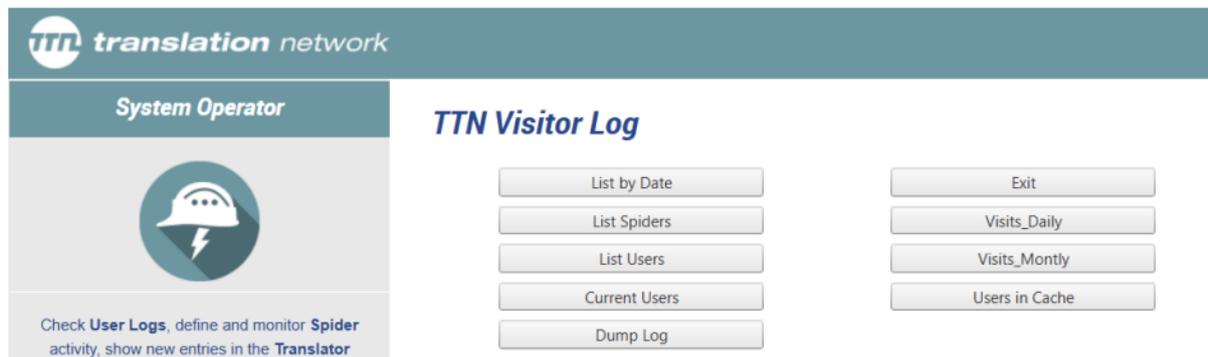


Figure 85: TTN logging system

17.1.1 What firewall and geo-restriction measures are in place?

TTN employs an advanced firewall system to protect the TMS. All incoming and outgoing network traffic passes through strict firewall rules, and the firewall logs connection attempts and traffic details for security monitoring. Geo-restriction measures are implemented to block or limit access from certain regions or jurisdictions as required. For example, the system can be configured to deny connections from specific countries or states known for high risk or not relevant to the business. Any connection attempt that is blocked by these geo-filters is recorded in the firewall logs. These measures reduce exposure to malicious traffic by analysing IP geolocation and only allowing access from permitted regions. All firewall and blocking events are logged and can be reviewed by administrators to identify any unusual patterns or repeated unauthorised access attempts.

17.1.2 How does TTN detect VPN or proxy connections?

The platform includes VPN and proxy detection measures to enhance security. TTN TMS uses IP intelligence databases such as IP2Location to determine if a user's IP address is coming from a known VPN service, proxy, Tor exit node, or other anonymised source. If a connection is identified as a potential VPN/proxy, the system can flag it or block it according to security policy. This prevents users from bypassing geo-restrictions or hiding their true location. All such events are logged with details of the detected proxy/VPN. These logs enable the team to review and ensure that only legitimate, traceable user connections are interacting with the system.

Spi	No	O Add	Archives	Invoice	Register	Tdb	Date	IpNo	User	In	Provider	UserAgent
<input checked="" type="checkbox"/>	4264139	0	0	0	0	2	12.04.25 19:04	57.141.0.6			SITA-SOCIETE INTERNATIONALE DE TELECOMMUNICATIONS AERONAUTIQUES, SITA.NET	meta-externalagent/1.1 (+https://developers.facebook.com/docs/sharing/webmaste
<input type="checkbox"/>	4264138	0	0	0	0	0	12.04.25 19:04	83.204.97.225	Martin Bächtold			Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/53 (KHTML, like Gecko) Chrome/135.0.0.0 Safari/537.36
<input checked="" type="checkbox"/>	4264137	0	0	0	0	2	12.04.25 19:04	57.141.0.30			SITA-SOCIETE INTERNATIONALE DE TELECOMMUNICATIONS AERONAUTIQUES, SITA.NET	meta-externalagent/1.1 (+https://developers.facebook.com/docs/sharing/webmaste
<input type="checkbox"/>	4264136	0	0	0	0	0	12.04.25 19:04	54.36.148.222			MERCK AND CO. INC, RUBIXINFOTECH.COM	Mozilla/5.0 (compatible; AhrefsBot/7.0; +http://ahrefs.com/i

Figure 86: TTN's dedicated logging system allows monitoring of access to the website

17.1.3 Are the email and DNS servers monitored for security?

Yes. TTN's email and DNS infrastructure are closely monitored with automated logging and alerts. The email servers automatically log all sent and received messages, including metadata like sender/recipient, time, and IP. Unusual email events – for example, a high volume of outgoing messages or repeated failed delivery attempts – will trigger alerts to the IT team. This helps in detecting spam, spoofing, or any email system misuse early. Similarly, the DNS servers are configured to log queries and any changes to DNS records. Any unexpected or unauthorised change in DNS (such as an attempt to redirect a domain) generates an immediate alert. These controls ensure the integrity of TTN's communication channels: if any irregular activity occurs in the mail or DNS systems, administrators are notified in real time so they can take prompt action.

17.1.4 What internal logging and traceability features does TTN TMS provide?

TTN TMS maintains detailed internal logs for all significant user and system activities, which provides full traceability across the platform. Every user action – such as logging in, downloading a translation file, updating a project, or changing a setting – is recorded with a timestamp and the user's identity. The system creates an audit trail for each project and transaction, so that every step can be followed and reviewed. This includes logging of actions by automated subsystems as well. For example, internal "robot" processes (such as the mail-processing robot or automated workflow agents) have their own logs of the tasks they perform. All these logs are centralised or linked via unique identifiers (e.g. order IDs or transaction IDs), allowing cross-referencing of events across different modules. This comprehensive logging approach means administrators can trace a sequence of events from start to finish, even if it spans multiple subsystems. It greatly enhances accountability and helps in troubleshooting, since there is a clear record of each operation and who or what initiated it.

Select	Order	User
/FRM Tci/Jump.aspx?SP=2		
/FRM Tci/Orders/Order.aspx?SP=2&s MasterNo=15ea9412-47ae-434b-a37d-1bfb47e9c869	1 74068 CAD-Hilfeseite 2025 (AE)	Stangl Michael
Dummy		
/FRM Tci/Orders/Order.aspx?SP=2&s MasterNo=15ea9412-47ae-434b-a37d-1bfb47e9c869	1 74068 CAD-Hilfeseite 2025 (AE)	Stangl Michael
/FRM Tci/Orders/List.aspx?SP=2&StatusNo=PpOk		

Figure 87: URL with arguments, order number and order name, and user

17.1.5 Can administrators monitor the system in real time?

Administrators have access to real-time monitoring tools for TTN TMS, and they can supervise the system remotely, including from mobile devices. The platform provides live dashboards and status views showing key metrics and security events. In addition, TTN TMS has a proactive alerting system: if certain conditions or anomalies occur (such as a server error, a security alert, or a missed deadline), the system will automatically send notifications. These alerts can be delivered via email or even SMS/secure messaging apps, allowing on-call administrators to be notified immediately. The web-based admin interface is mobile-friendly, so authorised staff can securely log in from a tablet or smartphone to check system status, review logs, and respond to issues in real time. This capability ensures that critical events are not missed and that the support team can react swiftly from anywhere.

Autoforward

25 00 36	ConfirmExe: 74065 PP: Hotvedt Files: 2 Pname: ZNET-DFZD4R_TR_05467
25 00 32	TR_to_CO: 74065 CO: Grott Files: 2 Pname: ZNET-DFZD4R_TR_05467
24 23 44	ConfirmExe: 74064 PP: Hotvedt Files: 3 Pname: ZNET-DFZCVY_TR_05466
24 23 42	TR_to_CO: 74064 CO: Grott Files: 3 Pname: ZNET-DFZCVY_TR_05466
24 17 12	Autoforward Order PpExe_to_SentCl > Slf202504241424_snoww... < to Thomas Stucki
24 17 12	ConfirmExe: 74070 PP: Bertocchi Files: 1 Pname: Slf202504241424_snoww...
24 17 11	Autoforward Order PpExe_to_SentCl > Slf202504241424_snoww... < to Thomas Stucki
24 17 11	ConfirmExe: 74070 PP: Pybus Files: 1 Pname: Slf202504241424_snoww...
24 16 51	Autoforward Order PpExe_to_SentCl > Slf202504241424_snoww... < to Thomas Stucki
24 16 51	ConfirmExe: 74070 PP: Gondouin Files: 1 Pname: Slf202504241424_snoww...
24 16 51	TR_to_CO: No CO Card for 74070 Slf202504241424_snowweather
24 16 31	ConfirmExe: 74068 PP: Pézard Files: 1 Pname: CAD-Hilfeseite_2025_(AE)
24 16 26	Autoforward Order New_to_PpOk Slf202504241424_snoww... from Thomas Stucki

Page size: 13
 1000 items in 77 pages

Figure 88: Monitoring of auto-forward activity

17.1.6 How are password reset attempts handled and logged?

TTN TMS treats password reset attempts with a high level of scrutiny to prevent unauthorised access. Every request to reset a password is logged with details such as the user account in question, the time of the request, and the source IP address. The system will only initiate a password reset process after verifying the request (typically by sending a secure reset link to the user's registered email address). If there are multiple or rapid-fire reset requests for the same account, or any pattern that appears unusual, the system flags it for manual review by an administrator. In such cases, TTN staff will manually verify the user's identity (for example, contacting the user through a known communication channel) before allowing the password

reset to proceed. This manual verification step, combined with thorough log records, ensures that password resets are legitimate. By having these logs and checks in place, TTN TMS prevents malicious actors from using the password reset function to gain unauthorised access, thereby maintaining account security.

Password lost

Name or IP No	Email	Date	UserNo	Name in DB	Firm in DB	Login
178.174.92.18	info@carrosseriesuisse.ch	25.04.25 08:58	1_24677	Zentralsekretariat Zentralsekretariat	Carrosserie suisse	info@carrosseriesuisse.ch
Autosend: Zentralsekretariat	info@carrosseriesuisse.ch	25.04.25 08:58	1_24677	Zentralsekretariat Zentralsekretariat	Carrosserie suisse	info@carrosseriesuisse.ch

Figure 89: Monitoring of password reset requests

18 FAQ about Translation Memories and Termbases for Future AI

18.1 What are translation memories (TMs) and termbases (TBs)?

A translation memory (TM) is a database that stores sentences or segments of text in one language alongside their translated equivalents in another language. In practice, whenever a translator works on new content, any sentence that has been translated before can be retrieved from the TM so it doesn't have to be translated from scratch again. A termbase (TB), on the other hand, is an organized glossary of terminology – it contains important terms or phrases and their approved translations. Termbases help ensure that everyone uses the same consistent translations for key terms (like product names, legal phrases, or industry jargon).

Translation memories and termbases are fundamental tools for human translators. They improve consistency and efficiency by reusing past translations and enforcing standard terminology. Over time, a company builds up large TMs and TBs that reflect its preferred wording and style in multiple languages. These resources have long been valuable for speeding up translation projects and maintaining quality – and now they are becoming strategic assets for powering AI systems as well.

18.2 Custom multilingual AI models: are they affordable?

Not long ago, training a large language model from scratch was prohibitively expensive. Early advanced models (like the original GPT-3 in 2020) were estimated to cost several million dollars in computing power to train, often taking months on specialized hardware. Only tech giants with deep pockets could undertake such projects, while other organizations had to rely on generic pre-trained models.

Today, a clear paradigm shift is underway. Major cloud providers such as Amazon Web Services (AWS), Microsoft Azure, OpenAI, and Anthropic now offer mechanisms to fine-tune pre-trained language models at a fraction of previous costs. Rather than building an AI model from scratch, organizations can further train existing large models using their own data. For example, in December 2025, Amazon announced new features within its Bedrock and SageMaker AI platforms to simplify model customization, including reinforcement fine-tuning workflows capable of significantly improving model accuracy. These tools, together with comparable offerings from Azure and OpenAI, substantially reduce the cost and complexity associated with developing custom AI applications. Microsoft's Azure Machine Learning service, for instance, provides a platform that supports language model fine-tuning and deployment without requiring extensive infrastructure investments. In summary, fine-tuning large language models on proprietary data is no longer a niche, multimillion-dollar endeavour, but is increasingly becoming a standard business practice.

For translation agency clients, this shift means that even medium-sized organizations can now consider training or refining AI models that are aligned with specific domains and languages. Rather than relying on a one-size-fits-all solution, an organization can deploy an AI model that reflects its terminology, product information, and communication style. Fine-tuning a model using organization-specific bilingual data, such as translation memories (TMs) and termbases (TBs), can significantly enhance AI performance in tasks such as multilingual customer correspondence or support interactions. In essence, an AI model tailored to organizational content is able to communicate more naturally and accurately, having been trained on the organization's own linguistic assets.

18.3 Why is structured language data critical for AI training?

As AI model customization becomes more accessible, the fuel for these models is increasingly the organization's own data. For language-focused AI, multilingual content like translation memories and termbases becomes critical training material. A translation memory is essentially a repository of paired sentences in different languages (source and target), and a termbase is a database of approved translations for important terms and phrases. Together, these resources represent a company's accumulated linguistic knowledge – everything the company has already translated, along with how it prefers to phrase things.

This bilingual content is highly valuable for AI training. Fine-tuning a model using existing translation memories (TMs) and termbases (TBs) infuses the AI with organization-specific vocabulary and writing style across all supported languages. Studies have shown that fine-tuning large language models with in-house translation memory data significantly improves the use of correct domain-specific terminology and the ability to reproduce the desired style, resulting in higher-quality translations and responses. In one documented case, leveraging an organization's own TM enabled a custom model to process highly specialized texts with appropriate jargon and nuanced phrasing far more effectively than a generic out-of-the-box model. In essence, the AI learns from past human translations and becomes increasingly adept at recognizing preferred terminology and phrasing established over time.

This trend also elevates the role of the translation provider. Translation agencies such as TTN TMS are no longer limited to delivering translated documents, but increasingly act as custodians of multilingual knowledge assets. Rather than allowing translation archives to remain static, a provider such as TTN TMS can maintain and curate linguistic databases in a form suitable for AI use. Many language service providers are already pursuing this approach, and TTN TMS is well positioned to do the same. By leveraging large volumes of human-validated translations accumulated over time, a translation agency can support the development of custom AI models tailored to specific domains, thereby improving translation quality and maximizing the long-term value of translation data. In this context, past translations are not merely archived documents, but constitute the foundation for future multilingual AI systems capable of reflecting organizational terminology, style, and subject-matter expertise with a high degree of precision.

18.4 What is retrieval-augmented generation (RAG)?

One of the more recent developments in AI is retrieval-augmented generation (RAG). Even a fine-tuned language model can encounter limitations when handling very recent information or answering detailed, fact-based queries. RAG addresses this by connecting the AI model to an external knowledge source, such as a document repository or knowledge base, at the time an answer is generated. In this approach, the model retrieves relevant information from external sources in real time and incorporates it into the response generation process. The principal benefit of this method is known as grounding: AI responses are supported by concrete, verifiable information drawn from authoritative data sources rather than relying solely on knowledge acquired during training. Grounding responses in reference material significantly reduces the risk of hallucinations, as the model is guided by validated facts or approved content when formulating outputs.

Clean translation memories and termbases can serve as part of that external knowledge source for an AI system. Imagine you have a multilingual chatbot or virtual assistant. Clean

translation memories (TMs) and termbases (TBs) can form part of such external knowledge sources for AI systems. In multilingual chatbot or virtual assistant scenarios, the system can consult repositories of previously translated content or approved terminology when uncertainty arises regarding phrasing, translation, or factual accuracy. This represents a form of retrieval-assisted generation in which the AI not only produces responses, but also incorporates contextual information from relevant documents, such as curated bilingual resources. Over time, the model learns when and how to access these references, resulting in more reliable grounding in organization-approved information. The outcome is an AI assistant that consistently applies correct product names, legal notices, and technical terminology across languages by retrieving validated content from maintained translation memories and termbases whenever appropriate.

18.5 Why does translation data need to be clean for AI?

All AI-related advantages depend on the quality and maintenance of the underlying data. If a translation memory contains duplicate entries, outdated translations, or inconsistent wording, these deficiencies may be learned and reproduced by the AI model. Training or fine-tuning an AI system on poorly curated data can result in the propagation of errors or the generation of unreliable outputs. Similarly, if a termbase includes ambiguous or incorrect terminology, an AI-based assistant relying on that data may produce inaccurate or misleading information. In essence, the principle of “garbage in, garbage out” applies: AI performance is directly determined by data quality.

For this reason, sustained investment in clean and well-maintained translation memories (TMs) and termbases (TBs) is essential to ensure long-term AI readiness. Although data curation may appear operational rather than strategic, it has become a fundamental prerequisite for effective AI deployment. Inaccurate or obsolete data undermines trust in AI outputs, whereas consistently curated and up-to-date linguistic resources enable AI systems to deliver precise, reliable results. Multilingual content can be viewed as the training foundation for AI systems: high-quality, balanced data supports robust model behaviour, while inconsistent data leads to degraded performance.

For translation agencies and their clients, maintaining clean linguistic data entails several concrete operational practices. These include updating translation memories exclusively with validated and proofread translations, rejecting entries that do not meet quality standards, identifying and removing duplicate segments, and retiring obsolete content such as outdated slogans or superseded product descriptions. It also involves continuously expanding and maintaining termbases with clearly approved terminology and, where necessary, usage notes. Through these measures, training datasets used for AI fine-tuning or multilingual chatbot deployment remain accurate, consistent, and aligned with current linguistic standards. As a result, AI systems can reproduce the same level of quality, terminology consistency, and stylistic coherence that has been established through human translation processes.

18.6 Why are TMs and termbases an investment in the future of AI?

Looking ahead, the boundary between translation services and AI services is increasingly blurred. Translation providers are becoming key partners in the development of multilingual AI solutions, as they manage the linguistic data that underpins effective AI systems. Collaboration with a translation agency not only results in translated content, but also contributes to the continuous enrichment of bilingual knowledge repositories that can be leveraged to train future

AI-based customer service agents or internal knowledge assistants. As cloud platforms such as AWS and Azure continue to expand their capabilities for custom AI development, and as providers like OpenAI further lower the barriers to model fine-tuning, competitive advantage will increasingly favour organizations with rich, clean, and domain-specific linguistic data readily available. Organizations maintaining well-structured translation memories (TMs) and termbases (TBs) are therefore best positioned to develop AI models that accurately reflect their terminology and content.

In this context, maintaining clean TMs and TBs extends beyond translation efficiency and represents a strategic investment in organizational AI readiness. A well-maintained translation memory effectively constitutes a parallel corpus of multilingual communication accumulated over time, providing a valuable foundation for training custom multilingual AI models. Similarly, a termbase functions as an authoritative multilingual reference of approved terminology, ensuring consistent and accurate term usage in AI-generated content, including product names and regulatory language. Treating these linguistic assets as strategic resources ensures that future AI deployments are grounded in reliable and validated data.

From a leadership perspective, this evolution highlights the long-term value of translation and localization activities. Multilingual content produced today directly supports future AI initiatives, reducing the need to build AI knowledge bases from scratch. Many organizations already possess extensive repositories of validated translations and terminology that can be reused for AI development, provided that these assets are properly maintained. As with financial data management supporting accurate business intelligence, disciplined linguistic data management is essential to ensure the reliability and accuracy of AI language models.

Ultimately, the role of translation memories and termbases extends well beyond supporting human translation workflows. These resources are becoming foundational components of multilingual AI capabilities. By maintaining comprehensive, consistent, and up-to-date linguistic data, organizations establish the conditions necessary for AI systems to understand content accurately and communicate effectively across languages. As AI increasingly supports customer interaction and content creation, a robust multilingual data foundation will represent a critical differentiator. Translation agencies, with their expertise in managing and curating linguistic resources, serve as natural partners in this transformation. Sustained investment in clean TMs and TBs today is therefore a key step in preparing for an AI-driven future, in which high-quality multilingual data underpins superior communication across all languages.