Developing a translator training platform by clarifying translation process through user story map

Kyo Kageura 1, Mararu Yamada 2 and Takeshi Abekawa 3

1 The University of Tokyo, Japan. kyo@p.u-tokyo.ac.jp
2 Kansai University, Japan. yamada@apple-eye.com
3 National Institute of Informatics, Japan. abekawa@nii.ac.jp

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1. Introduction


MNH-TT is fully functional, providing a collaborative translator training environment. In the design and development of original MNH-TT, translator training experiences accumulated in the Centre for Translation Studies, University of Leeds, provided the requirements and desiderata for such a system to satisfy. Thus the development was carried out in concept- and function-oriented way. A fully functional experimental version of MNH-TT was released in 2015 and provided for experimental use by several collaborating institutions. Through the experimental use, we had identified issues in the relationship between user expectation and system behaviour. At the same time, after several years since the first experimental version was released, the update of system functions became necessary.

In updating MNH-TT, we adopted a user-oriented approach, taking advantage of the fact that the first experimental version of the system was fully functional. The basic procedure is as follows:

1. identify basic functions provided by the system;
2. organise the functions in accordance with the use case scenario;
3. define a user story map that enables to clarify different user experiences for different types of users;
4. define system functions, function flows and interfaces that match the user experiences identified using wireframe and other mechanisms.

This cycle was repeated several times before going on to actually updating MNH-TT.

In this paper, we intend to share the key aspects of this process and basic issues in defining translator training system in university courses or translation schools that were identified in the
The rest of the paper is organised as follows. Section 2 gives a brief overview of the first version of MNH-TT. Section 3 describes the development of the user story map. We introduce here the process as well as some concrete issues related to translator training. Section 4 gives an explanation of connecting the user story map with system interfaces. Section 5 gives conclusions and outlook.

2. A brief overview of MNH-TT

2.1 Concepts

As explained above, MNH-TT was originally developed jointly by NICT, Japan, The University of Tokyo, Japan, CTS, University of Leeds, UK, and NII, Japan. As a system, it was based on the online volunteer translator-aid system Minna no Hon'yaku (MNH) developed by NICT, The University of Tokyo and NII (Utiyama, et al. 2009; Kageura et al. 2011). The concepts and functional definitions are mostly designed based on the long experiences of translation teaching at CTS, University of Leeds. MNH-TT adopted several key concepts and ideas:

• Because translations in the real world are carried out as projects rather than personal activities, translator trainees should gain competence not only in translation in its narrower sense but also in how to play a role in, carry out and manage translation projects through communicating with other project participants (cf. CEN 2006; ISO 2015; EMT 2017). In other words, trainees should nurture both translation competence and translator competence.

• Translation training should be set up in such a way that actual translation situation is brought in (Kiraly, 2000).

Taking these factors into account, and taking into account teaching experiences in CTS, University of Leeds, MNH-TT was developed as a web-based translator training system that assists collaborative translator training that emulates real-world translation situation.

The system had following features, among others:

1. Facilitating project-based translation training. The system provided core functions in commercial CAT systems that assume project-based translation, but it was kept as simple as possible so that learners do not need to learn how to use the system.

2. Supporting learners by providing action categories and meta-languages such as issue categories (Castagnoli, et al. 2006; Secăru, 2005) and dialogue act types (Allen and Core, 1997) used in the process of translation project.

3. Promoting reflective learning by accumulating logs of activities and providing them through systematic visualisations (cf. Pym 2009).

2.2 Brief description of MNH-TT

We here give basic descriptions of MNH-TT, as they are (a) used as the basis for updating and (b) the core parts remain the same in the updated version.

Users: Users are divided into four categories, i.e. system administrator, organisation manager, instructor and learner. To use MNH-TT, an organisation (normally translation school or department but this unit can be flexible) decides an organisation manager and register the organisation together...
with manager. Once organisation and organisation manager is registered, the organisation manager can register instructors and learners. Instructors can register learners.

Projects: Translation training proceeds in a project framework. An instructor sets up a project framework. The project components consist of information, participants, documents, workflow, glossaries, TM, resources, bulletin boards and statistics. Figure 1 shows the project screen.

Roles and tasks: Project participants take one of 12 roles: requester, project manager, researcher, terminologist, translator, reviser, reviewer, proof reader, tm manager, mt manager, mt pre editor and mt post editor (cf. CEN 2006; ISO 2015). The instructor can take the project manager role or s/he can assign a learner to be the project manager. Six task groups of brief, workflow, terminology, translation, tm, and mt are defined, which are related to 12 roles. There are in total 23 tasks each of which belong to one of the six task groups. Note here that the roles and tasks assigned to participants (mostly learners) are not limited to translation in its narrower sense. A project can cover full roles and tasks or can be selective, e.g. covering only the core translation process of translation, revision and review, etc.

Workflow management: MNH-TT provides standard workflow management functions and interface.

Dialogue acts: Project participants interact with other participants through bulletin board. To facilitate structured communication in the project, the system provides a standard dialogue act categories as scaffolding of communication, consisting of four major roles of information, maintenance, status and role. These are further divided into in total 14 dialogue act types (Allen and Core 1997).

Translations and revisions: The core process consisting of translation, revision and review is carried out on translation-aid editor, which provides reference lookups and revision functions. Revisions and reviews are made by using issue categories originated from MeLLange (Castagnoli 2006; Secară 2005), which facilitate conscious decision making by learners (Fujita et al. 2017). Figure 2 shows the revision stage (left) and the comparative mode (right) of the editor.

Resources: terminologies, translation memories and other resources can be registered or constructed in the system. They can be exported to be shared by other projects or to be used in other systems.

Inter-project/inter-organisational collaboration: The system facilitates the collaborations.

Statistics and reflective learning: The pre-defined categories provided in MNH-TT function as scaffolding or meta-language for learners to gain translator competence. Issue categories used in Figure 1 Project main screen.
revisions and dialogue act types are the main ones but roles, tasks and other item categories also function as meta-languages. Logs of participants' actions are recorded in accordance with these categories and can be checked through visualisation mechanisms to promote reflective learning.

Figure 3 shows the basic bar-plot of revision categories applied to documents in a project.

3. Developing a user story map: Necessities, process and results

3.1 Necessities of a user story map

The first version of MNH-TT was fully functional. Several organisations used it experimentally. Through the experimental use and a workshop in which several translation schools from East Asia and Europe took part, we observed several issues from the user side. The identified issues are mostly related to the relationships between projects and other layers of the translation training process. For instance, in translation training setups, it is often the case that a source document material is used for translation practice among different groups. So it is perceived more convenient if instructors can define the task independently of the project. In the original MNH-TT, however, the task can be defined in each project. It is also perceived convenient if common resources can be maintained independent of the project. Correspondingly, reflective learning also should be carried out not only within the project but also across the projects that deal with the same source document but are carried out by different groups.

The original MNH-TT put the unit of project as the central unit of process and designed...
defined all the functions in a unified way around the concept of project. This helped defining the elements of translation and translator competences needed for carrying out a translation project and embedding the functions and scaffolding mechanisms that facilitates the development of these competences in the system. Also, thanks to this policy, MNH-TT succeeded in constructing a system that naturally emulates the basic processes involved in real-world translation projects, which has been one of the important issues in translation courses (cf. Way 2008).

At the same time, however, superimposing pedagogical processes onto the project-based process was left to instructors, who have to organise pedagogical processes essentially outside the functionalities provided by MNH-TT.

To integrate the pedagogical process with project-oriented processes defined in the first version of MNH-TT, it was recognised necessary to systematically clarify expected user actions and experiences, because pedagogy is by definition a human-centric process.

To systematically define the functionalities and their organisation in the updated version of MNH-TT, we decided to start from defining a user story map (e.g. Patton 2014; Bitner and English 2018), as it enables us to systematise functions in accordance with users' experiences. We could use the project-oriented processes defined and reflected in the first version of MNH-TT as a point of departure for defining the user story map.

### 3.2 Process of defining and refining a user story map

Against this backdrop, we defined and refined a user story map for the second version of MNH-TT in the following manner.

1. Identify basic functions provided by the system;
2. Organise the functions in accordance with the use case scenario;
3. Define a user story map that enables to clarify different user experiences for different types of users.

We repeated these processes several times from December 2019 to March 2020 until the story map becomes established and stable.

The first stage of phase 1 was straightforward because we already have a fully functioning MNH-TT system, in which items including documents, users of the system and participants of the project and functions as well as their relationships are all defined. These are put in the form of user-story map, which revealed that some functions belong at once to different user experiences. Issues related to the relationships between project-centred definitions of functions and items and pedagogical processes and how to integrate pedagogical processes with project-oriented translation processes became clear through the process.

Figure 4 (a)-(d) shows the four main stages of refining the user story map (displays are in Japanese but we show them so that the readers can see how user story maps are organised; we added explanations of the main points).

Figure 4(a) shows the first user story map that reflects the original version of MNH-TT functionalities and use scenario. Note that top level processes are defined by "project." Figure 4(b) shows the user story map when "classroom" was first introduced. Correspondingly, "project skeleton" was added. Once classroom layer was introduced, missions of instructors and learners become dual, i.e. the missions in the classroom and the missions in the project. Figure 4(c) shows the stage in which this duality was identified but not clearly defined in the map. Finally, it was decided that the translation materials should be pooled in the classroom with pedagogical missions and are to be imported to projects with project missions. Figure 4(d) shows the final user story map.
Figure 4 (a) The first stage of the user story map. Map parts consist of "project".

Figure 4 (b) The user story map when "classroom" was first introduced.
Figure 4(c) User story map in which the duality of missions is identified

Figure 4(d) The final version of the user story map
Main results

Through the process of refining the user story map, we structuralised the relationships between user expectations in the pedagogical setup and the actions defined in the project - centred functionalities provided in the original version of MNH-TT. We defined the classroom layer, which was notably absent from the first version. This produced the situation in which some concepts, items and functions belong both to the classroom layer and the project layer. There of course is nothing inherently wrong in this duality, as this simply reflects the fact that projects are emulated in classroom in the pedagogical setup. At the start of defining user story map, we identified that the original version of MNH-TT left classroom functionalities to instructors' efforts outside the system. Through the refinement of the user story map, we succeeded in defining their relationships systematically to the extent that we can design the update of MNH-TT in such a way that the system incorporates classroom operations and the relationships between classroom operations and project operations are clearly defined in accordance with the experiences of different users, namely instructors and learners.

4. System interfaces/functions and user story map

The user story map should be reflected in the updated version of MNH-TT. For actual implementation, therefore, framework, elements, functions and user experiences identified in the user story map should be transformed to system functions and user interfaces in concrete terms. This is done first by mapping the original user story map to the original MNH-TT interface and then diagnose necessary changes to be made to the functions and interfaces for the system to incorporate the final user story map. Figure 5 shows the project part of the mapping between the original user story map and the original MNH-TT interfaces. Figure 6 shows the mapping between the classroom part and the project part of the user story map and the designed interface. Figure 7 shows the interface transitions with functional flows in classroom as a wireframe.

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Figure 5 Mapping between the user story map and system interfaces (original)
5. Conclusions and outlook

In this paper, we reported the process of revising MNH-TT, a project-centred translation training system with scaffolding functions. We detailed the process of structuring user experiences and system functions through defining and refining user story maps with the original MNH-TT functionalities as a point of departure. Although more emphasis is placed on the use of user story maps than the characteristics and merits of MNH-TT, we believe sharing this process would benefit not only...
In parallel with updating MNH-TT system, we are currently developing detailed meta-languages that enable translators to talk about translation processes systematically. They are to be plugged in to the new MNH-TT so that its users can consciously learn how to translate (translation competence) and how to talk about translation (translator competence). For users to fully utilise functions and meta-languages, matching between functions and meta-languages on the one hand and user expectations and experiences on the other is essential. It is also crucial for systematic update of the system in accordance with the enrichment of meta-languages. We will report the new version of MNH-TT when it becomes fully available.

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References


