



THE ASTRONOMY TRANSLATION NETWORK WORKFLOW PROJECT – FINAL REPORT

Joint project by the IAU-OAO and 5CIT ISIT students

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TABLE OF CONTENTS

1. INTRODUCTION	3
2. PROJECT TIMELINE	4
3. COMMUNICATION WITH THE PROJECT TEAM	4
4. BENCHMARK REVIEW	5
5. SURVEY OF THE VOLUNTEERS' NEEDS ON PLATFORM DESIGN.....	7
5.1 Objectives of the survey	7
5.2 Methodology.....	7
5.3 Results	8
6. RECOMMENDATIONS FOR THE PLATFORM.....	11
6.1 Platform structure	11
6.2 Volunteers registration	12
6.3 Rewards and gratifications	14
6.4 Translators certification	15
5.5 Material certification	17
6.6 User Feedback.....	17
6.7 Database organisation.....	18
6.8 Search Tool.....	18
6.9 Online tools	19
7. CONCLUSION.....	20
APPENDIX.....	21

1. Introduction

The Astronomy Translation Network Workflow Project is a 2017 joint project between the IAU Office for Astronomy Outreach (OAO) and National Astronomical Observatory of Japan (NAOJ) in Tokyo, and ISIT (School of Management, Communication, Training in law and Translation) in Paris.

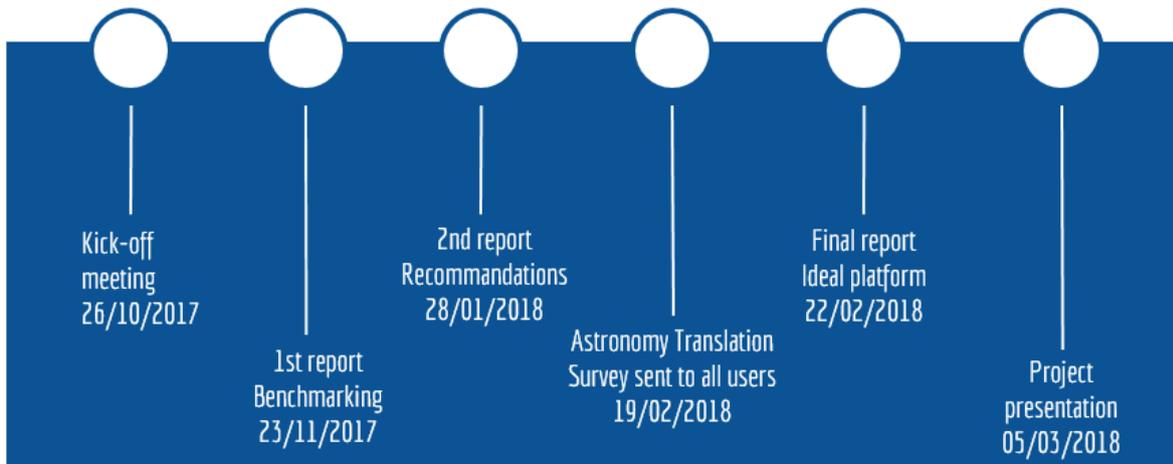
As ISIT CIT (Translation and Intercultural Communication) Master students, our work consisted in giving recommendations to the OAO concerning their Astronomy Translation Network platform. The goal for the OAO was to acquire a better understanding of what volunteers need in terms of tools and process, as well as advices on how to build a community-based online translation platform. Our expertise in translation, foreign languages, intercultural communication and website creation was quite relevant for this project.

Three reports were sent in total: the first report consisted in our benchmarking results after studying 10 translation platforms. These results were presented in the form of recommendations based on our observations. The point was not to deliver a complete description of each platform, but to point out what aspects would be useful to integrate in the future platform. The second report consisted in an additional benchmarking, and our first recommendations, considering the feedback from the first report. Finally, our last report displayed our ultimate recommendations, i.e. what should ideally be featured on the future platform.

This is an updated version of our final report. It presents the key elements on which we worked since the beginning of the project as well as our vision for a potential ideal future platform.

2. Project timeline

You will find below a quick timeline of the project. It was spread on a 5 months period, from the end of October 2017 to our final presentation on the 5th of March 2018. We decided to part this time in two big tasks: the benchmarking of translation platforms and project management software, and our recommendations.



3. Communication with the project team

At the beginning of the project, we agreed on the best methodology to adopt considering our needs as a team, and the OAO needs. Throughout the project, we kept this methodology in a consistent manner. The following decisions were made:

- Organise regular (every two weeks) internal meeting to discuss the tasks to conduct, individual work assignments, writing of the report and feedback from sponsor and tutor in a general meeting
- Discuss task management during the internal meetings and make sure that at the end, everyone knows what they must do. Set up deadlines for every task.
- Assign a project manager that will oversee all the activities. The project manager was the primary contact between the team members and all the other relevant actors in the project.
- At the beginning of every internal meeting, a team member is assigned to fill the log which contains the topic discussed and the tasks assigned during the meeting

- Send reports to the sponsor and take in account their feedback to improve the next report

4. Benchmark review

Here is a list of the websites we benchmarked during the first phase of the project, as well as a quick description of the services they offer.

Permondo: offers non-profit organisations the possibility to have their documents translated by linking them with volunteer translator (<http://www.permondo.eu/>)

Translatorswithoutborders.com (TWB): provides translation services for humanitarian non-profits (<https://translatorswithoutborders.org/>)

Dixit: customer-oriented online translation platform (<https://www.dixit.com/en/>)

Hopwork/Malt: links freelance translators with their client (<https://www.malt.com/>)

Translator's café: platform where freelance translators and interpreters can offer their services to registered translations agency (<https://www.translatorscafe.com/cafe/>)

OneHourTranslation: certified translators can find jobs with clients who can assign one or several translators to their project (<https://www.onehourtranslation.com/>)

ProZ: website targeting freelance translators, it is mainly used for posting and responding to translation job offer (<https://www.proz.com/>)

Scrybs: customer-oriented platform to find professional translator (<https://scrybs.com/>)

ESO: intergovernmental astronomy organization in Europe, we benchmarked their translation platform which aims at attracting volunteer translators for their several materials, all related to astronomy (<https://www.eso.org/public/outreach/partnerships/translators/>)

TextMaster: customer-oriented platform to find professional translators (<https://uk.textmaster.com/>)

Memsources: non-free cloud-based CAT tool (<https://www.memsources.com/>)

XTM Cloud: online non-free project management platform (<https://xtm.cloud>)

After benchmarking these different platforms, we identified Basecamp as the best management platform, and Slack as the best communication platform.

When the volunteer passes the test, they will have access to both tools. They should also be able to take a training, through videos or an integrated training page on the website. That way we ensure that the user know all the functionalities of the tools they are going to use.



On Slack, we have identified the following functionalities that could be helpful for our volunteers:

- Channels to categorise discussions
- One chat for one project
- Share any type of document in a conversation
- Notifications and smartphone app



On Basecamp, the following functionalities make it the best management platform according to us:

- To do lists
- Work groups
- Schedule
- Project management

5. Survey of the volunteers' needs on platform design

5.1 Objectives of the survey

Our objective at this point of the project was to see what could be improved with the existing platform. We wanted to know how much the users were satisfied with existing functionalities and tools. The goal of the survey was also to find out if we needed new tools, or if we needed to better inform the volunteers about the existing platform functionalities. Ultimately, we also wanted to have a better idea of the needs of our volunteers, both in terms of platform design and services.

5.2 Methodology

To be able to collect the most insightful comments and answers for our goal, we decided to design a survey based on UX Design principles.

UX Design is the process of creating products or platforms that provide meaningful and personally relevant experiences to the users. The focal point of UX Design is the users: what do they need? how can we create a platform that both answer these needs and gives them pleasure to use?

The key to have a UX-intelligent website is mostly to organise workshops with users and users-to-be in order to discover what happens exactly when they use the website: for example, what they are looking for at first and if it is easy to find.

UX Cards



The card set developed by Carine Lallemand is a pragmatic tool to find out what are the needs of a platform's user¹.

There are 7 cards in total, and each one of them describes an experience related to psychological needs. In the poll, we will ask users to choose a maximum of 4 cards according to their needs.

This will help us confirm ideas that we had about the platform.

5.3 Results

Here are some of the results of the survey we created and sent to the users of the platform on February 19th, 2018.

The survey consisted of 9 questions, the last one being an open suggestion box.

We analysed the most important results first as well as the suggestions and draw recommendations regarding the next steps to take in order to improve the existing platform.

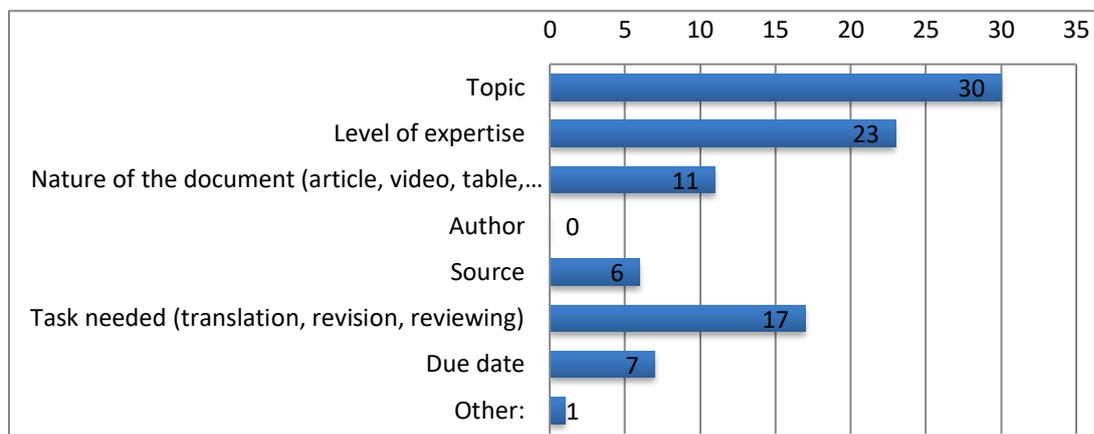
33 participants answered the survey.

A sample of the survey can be found in the Appendix.

¹ LALLEMAND Carine, GRONIER Guillaume, *Méthode de design UX*, Eyrolles, 2015

1) Results

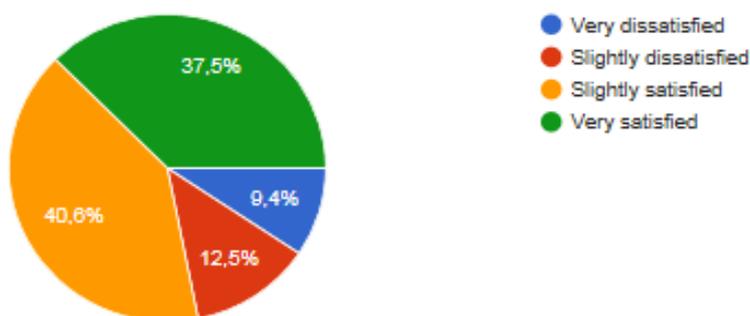
Q3: What is the most important information you look for when choosing a document to translate/review (other than the source and target language)?



With the results here, we can see volunteers on the platform value most the topic, level of expertise and task needed on the document.

We have included a “status” bar in the database tool which will answer this need, and it would be useful to add another column with information concerning the technical and linguistic level required to translate the document.

Q4: How satisfied are you with the interactions with your team (translators, proof-readers, scientific reviewers, language coordinators, project manager)? Could you explain why?



Here we can see most of volunteers are satisfied with team communication.

Nevertheless, some improvements can be made:

- Organisation: scheduling of tasks, documents download/upload process and platform, specific and formal guidelines. We think the 4CIT project will help with these needs. It would also be useful to make a campaign directed to the platform users, explaining

the rules and processes that are to be used. Ultimately, everyone should use the same platform the same way.

- Instant messages and communication: to avoid email boxes getting too full, one single platform should be used for messaging (Slack seems to be appreciated). Email should only be used in case of emergency or for high importance messages.

Q7: Choose 4 cards according to your needs as a user of a translation management platform.

Q8: Select up to four needs that you consider not fulfilled on Basecamp.

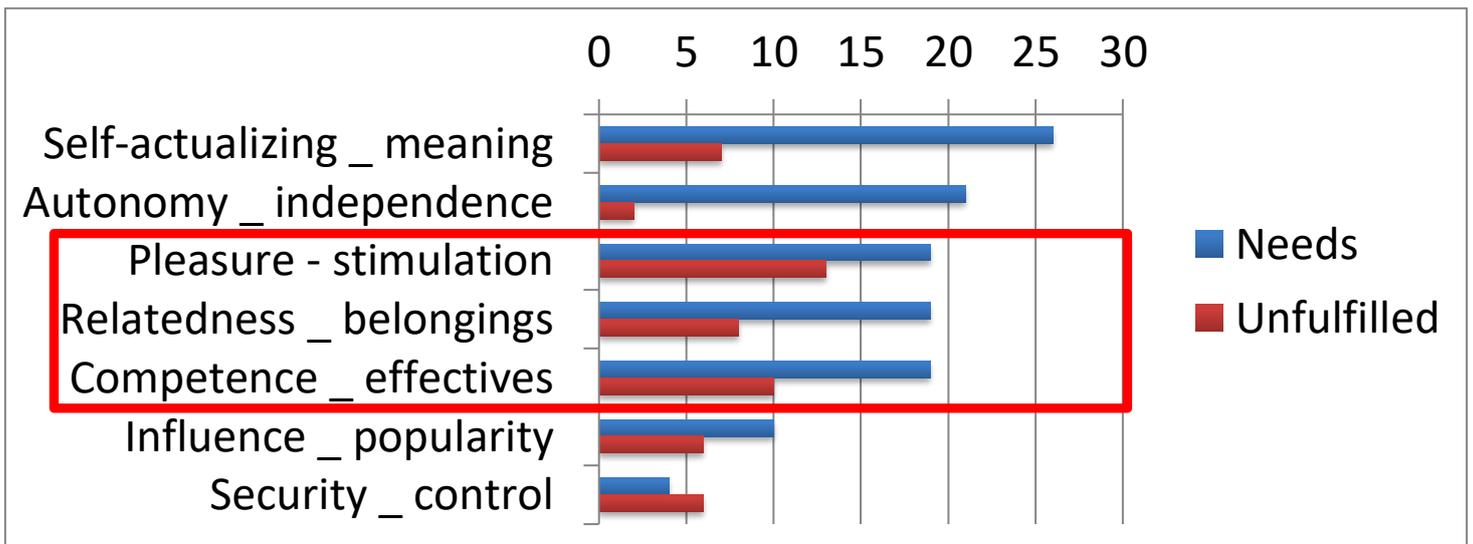
The four needs by order of importance:

- 1- I need to feel like I have a purpose, like I can make a difference and develop creativity.
- 2- I need to take responsibilities, work in my own time and not be pressed or influenced to do things.
- 3- I need to have regular and close contact with people, to interact with them, to feel like I am part of a community.
- 4- I need to have fun, to discover new things, to enjoy and experience new sensations.

The four needs not fulfilled:

- 1- Be challenged and stimulated
- 2- Show that I am effective and competent
- 3- Feel like a part of the ATN team
- 4- Be able to show my potential

In the following chart, you can see the correlation between what the users need and what existing needs they consider unfulfilled:



As we can see, these results confirm the need to create a **strong community** as well as **encourage volunteers** (through rewards and gratifications).

Volunteers also need to **have fun**, which can be answered by providing them with various interesting content on astronomy (videos, articles, etc) and a welcoming and easy to use website.

2) Suggestions from the volunteers

We have identified 3 main suggestions that also confirm our recommendations

1. Build a real community on the platform, not only by providing various content to the volunteers, but also by creating content and including all platform users in the process.
2. Make an infographic or quick video presenting the rules and of the platform and a step-by-step explanation for volunteer translators and reviewers. We also advice to create a document (pdf or ppt presentation) available on the platform as a reminder.
3. Set up a training session of both Basecamp and Slack. Some volunteers are not aware of all the functionalities and therefore might not use these two platforms to their full potential.

3) Next steps

- Run a translator's assessment pilot phase
- Implement a systematic and unified use of maximum two platforms (Slack/Basecamp and Astronomy Translation Network platform later on)
- Let the volunteers create their own content

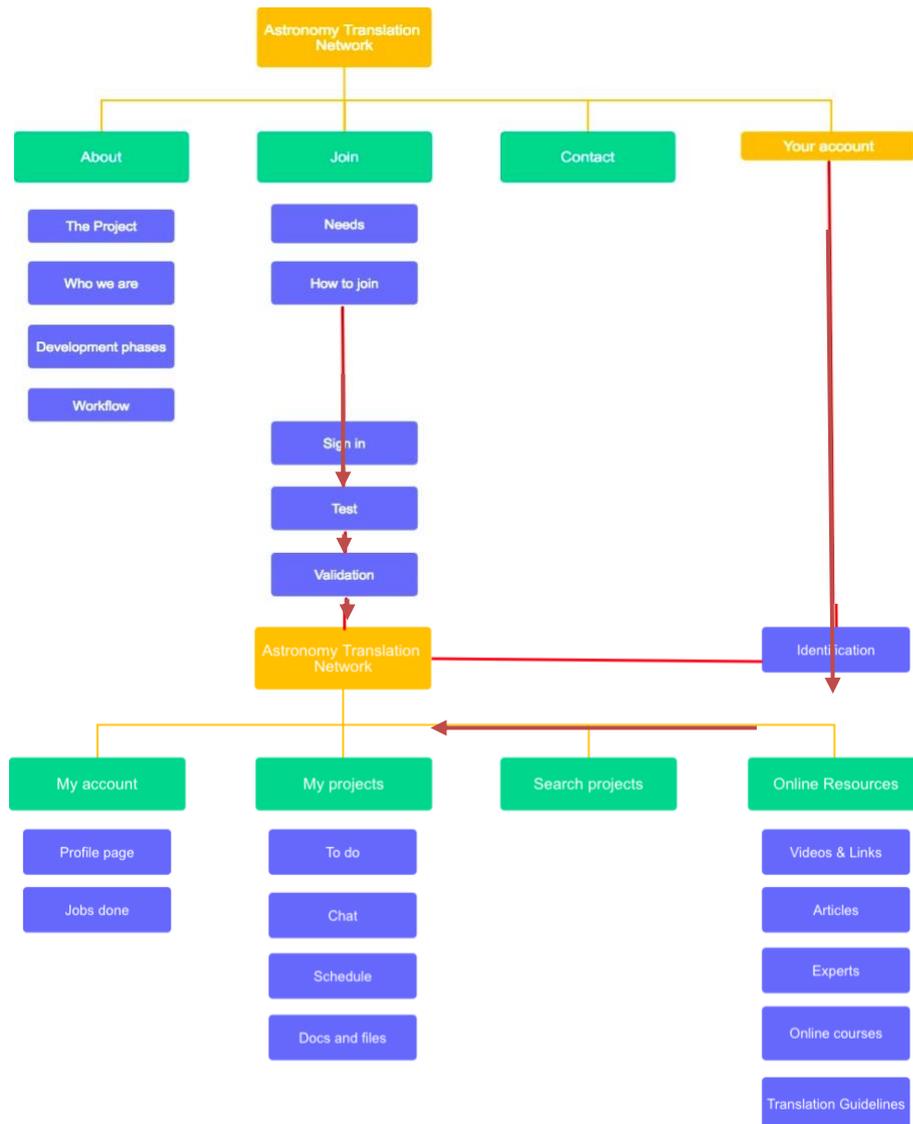
6. Recommendations for the platform

Based on the benchmark and the survey, we suggest the following recommendations for designing a new platform.

6.1 Platform structure

Here, we are keeping the current layout of the existing platform and integrating all the elements we mentioned in the rapport.

We are adding the profile page creation process (Join), which adds another layer on the website. Once you become a member, you can access the version of the website developed for our member volunteers. You will be able to oversee your recent and current activities, search a document to translate, proof-read and review on the database and have access to online resources.



6.2 Volunteers registration

Each new translator and proof-reader volunteer who wants to join the platform will register and creates their own profile page.

This will help build our community and create a sense of belonging for the new volunteers. They will be able to search for members and be in direct contact with them.

This phase consists of a step-by-step registration through the following windows:

Welcome

Want to join the Astronomy Translation Network?
Complete these five easy steps and become a new member!

ASTRONOMY TRANSLATION NETWORK

BRING MORE ASTRONOMY INTO YOUR LANGUAGE




Step 1

TELL US ABOUT YOU

LAST NAME*: Vladimir

SURNAME*: Irinov

NATIONALITY: Russian

WHERE DO YOU LIVE? Germany

* only these informations will be public

STEP 2

Step 2

TELL US ABOUT YOU

How would you like to volunteer?

- Translator
- Proofreader
- Scientific Reviewer

STEP 1 STEP 3

Step 3

YOUR KNOWLEDGE IN ASTRONOMY

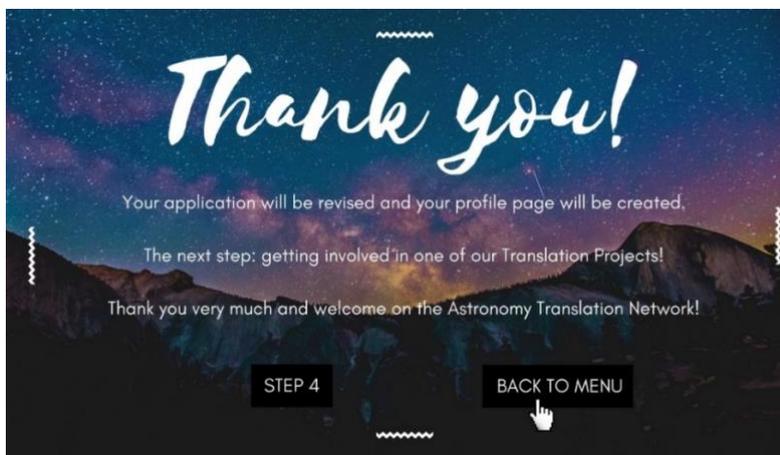
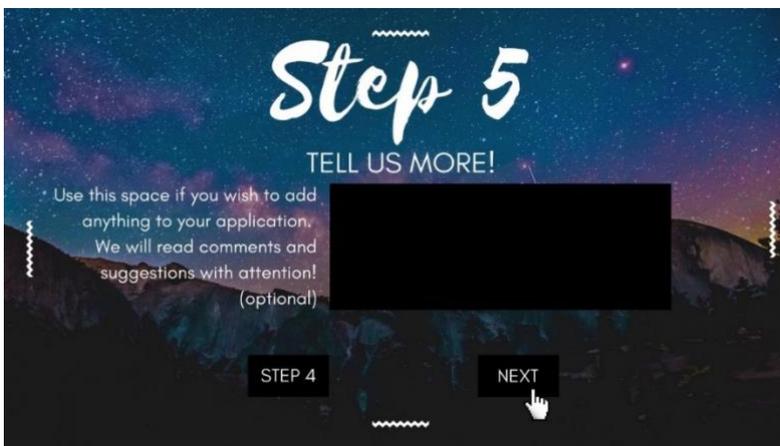
Do you have any experience in astronomy (volunteering, paid job, article, etc)?

YES NO

If yes, please give us some detail:

Worked in an Astronomical Review in Francfort from 2010 to 2016
Internship in the House of Astronomy of Francfort (2013)

PREVIOUS STEP 4



6.3 Rewards and gratifications

The translators are key in the platform and we must thank them for their work. This will be done in the following ways:

- Every time the translator finishes a translation and uploads it on the platform, a 'Thank you' pop-up window will appear on the screen.

- The name of the translator will be specified at the end of each translation.
- We won't put any translator in the spotlight, for example on the homepage. It's important that all the translators are equal and that nobody's work seems to be more valuable than others'.

6.4 Translators certification

It should be organized in **two steps**:

- **STEP 1:** Every volunteer receives one technical translation and one general translation to perform.
- **STEP 2:** One or two reviewers (ideally two, in order to have more than one opinion) revise the tests and assign translators roles accordingly.

Those who failed the technical translation but succeeded the general one will be assigned easier documents to translate, such as newsletter articles or general articles that don't require technical knowledge of astronomy.

Those who succeeded both translations can choose the documents they want to translate, technical or not.

Those who failed both translations tests won't be able to perform translating tasks for the platform. If they can prove they are experts in one field of astronomy (diploma, article, recommendation), they can become scientific reviewers in their native language.

In order to not discourage volunteers, several steps can be taken:

- thoroughly correct their tests with comments and advices on elements that can be improved and encourage them to train
- provide them with material to train (redirect them on a platform page containing training material like videos, articles, books, etc)
- provide volunteers with the possibility to retake the test after a certain period (once every two weeks for example)

The following grid can be used when assessing the work of translator's:

Translation Assessment Rubrique

Overall Grade /20	Usefulness/Transfer (5 pts)	Terminology/Style (5 pts)	Idiomatic Writing (5 pts)	Target Mechanics (5 pts)
Standard	The translated text is fully usable for the purpose specified in the task give. The meaning and sense of the source text have been fully and appropriately transferred to the translated text taking into account target language culture.	Terminology is appropriate in context and consistent throughout the text. Style and register are appropriate for the topic in the target language and for the specified audience.	Translated text reads smoothly and naturally. Wording is idiomatic and appropriate for the topic in the target language and for the specified audience.	Translated text fully follows the rules and conventions of target language mechanics (spelling, grammar, punctuation, etc.).
Strong	<input type="checkbox"/> Translated text transfers meaning in a manner fully consistent with the task given. Translation contains few or no transfer errors, and those present have a minor effect on meaning.	<input type="checkbox"/> Translated text contains few or no inappropriate term or style/register choices. Any errors have a minor effect on meaning.	<input type="checkbox"/> Translated text is almost entirely idiomatic and appropriate in context. Any errors have a minor effect on meaning.	<input type="checkbox"/> Translated text contains few or no errors in target language mechanics.
Acceptable	<input type="checkbox"/> Translated text transfers meaning in a manner sufficiently consistent with the task given. Translation contains occasional and/or minor transfer errors that slightly obscure or change meaning.	<input type="checkbox"/> Translated text contains occasional and/or minor inappropriate term or style/register choices. Such errors may slightly obscure meaning.	<input type="checkbox"/> Translated text contains occasional unidiomatic or inappropriate wording. Such errors may slightly obscure meaning.	<input type="checkbox"/> Translated text contains occasional errors in target language mechanics.
Deficient	<input type="checkbox"/> Translated text transfers meaning in a manner somewhat consistent with the task given. Translation contains more than occasional transfer errors that obscure or change meaning.	<input type="checkbox"/> Translated text contains frequent inappropriate and/or incorrect terms or style/register choices. Such errors may obscure or change meaning.	<input type="checkbox"/> Translated text contains frequent and/or obvious unidiomatic or inappropriate wording. Such errors may obscure or change meaning.	<input type="checkbox"/> Translated text contains frequent and/or obvious errors in target language mechanics.
Minimal	<input type="checkbox"/> Translated text transfers meaning in a manner inconsistent with the task given. Translation contains frequent and/or serious transfer errors that obscure or change meaning.	<input type="checkbox"/> Translated text contains excessive inappropriate and/or incorrect terms or style/register choices. Such errors obscure or change meaning.	<input type="checkbox"/> Translated text contains excessive and/or disruptive unidiomatic or inappropriate wording. Such errors obscure or change meaning.	<input type="checkbox"/> Translated text contains excessive and/or disruptive errors in target language mechanics.

Source: ATA (American Translators Association²)

Ideally, it would be interesting to run a pilot project to make sure all the steps run through perfectly.

² http://www.atanet.org/certification/aboutexams_rubic.pdf

5.5 Material certification

We have come up with a material certification form, that covers all the essential information required before submitting a resource to translate on the platform. Please check the link below to see it:

<https://himmelbr.polldaddy.com/s/material-certification-form>

This form will be available directly on the platform and everyone who wishes to submit a new resource for translation will be required to fill it. It will be reviewed by our team before being accepted.

Ultimately, this form will merge with the material request form, so that when someone wants to request the translation of a document, they will have to fill in information to make sure we are legally authorized to translate and upload the document on our platform.

6.6 User Feedback

The best option for us would be to include feedback boxes at the bottom of every page concerning the translated documents with a **five-star rating scale** that would represent the user's satisfaction with the article. On this scale 5 would mean the user is very happy with the article and 1 not so much.



Depending on the user's answer to the star scale, there are 2 options:

- If the user's level of satisfaction is very low (rating of 1 or 2 stars): **micro feedback form** pop-up. This will allow us to know what the user needs and improve our platform.
- If the user's level of satisfaction is high (rating of 4 or 5 stars): **pop up window** asking if they wish to congratulate and/or thank the author or the translator. It can contain a default (but customizable) message.

Example: "Dear ..., I enjoyed the article <title> written by <author> and translated by <translator> into <language>. Thank you for your work."

6.7 Database organisation

Below is how we think the database should be organised and presented on the platform. The “Field/Topic” category content can be used for glossaries and as keywords for the search tool. The “description” box will allow volunteers to see if they are interested in a document before having to read it or ask more information to the language coordinator. This will ensure a much smoother and fast process.

Title/ID	Category	Field/Topic	Format	Description	Source language	Target language	Due date	Status
[astroEdu] Deadly Moons	Educational Activity	Moons	html page	Through art and science, children learn about moons of our solar system	English	French	05/08/2018	Translation required
Naming of exoplanets	Scientific article	Exoplanets	html page		English	Japanese	13/03/2018	Revision required
IAU Astronomy Outreach Newsletter	Newsletter article	News	html page	Semi-monthly newsletter on astronomical education and outreach events	English	Chinese	24/02/2018	Translation and revision complete

6.8 Search Tool

Here is our final version of the research tool. It will be accessible directly from the main menu on the platform. This will allow the volunteers to look for documents they want to translate or revise

The screenshot shows the Astronomy Translation Network search interface. At the top, there's a navigation bar with links like 'About', 'Resources', 'Join', 'Request', 'Who we are', and 'Contact'. The main header area has a dark space background with stars and the text 'ASTRONOMY TRANSLATION NETWORK' and 'Bring more astronomy into your language'. A red circle highlights a 'Start Translating!' button. Below this is a search form with the following elements:

- Title... (with a search icon)
- Keywords... (with a search icon)
- Category (dropdown menu)
- Field/Topic (dropdown menu)
- Source language (with a search icon)
- Target language (with a search icon)
- Published date (with a search icon)
- Three checkboxes: Translate, Revise, Both

As you can see, this feature will allow a much more efficient and fast way to look for resources.

6.9 Online tools

We think the perfect platform would help its users as much as possible to accomplish successfully their tasks. One way of doing this is either suggesting or making available a set of online resources that could make considerably easier the user's work.

We suggest providing users the following online tools:

- **Online glossaries** → they help with the translation and understanding of technical words (we can use existing glossaries as well as the ones created by The Astronomy Translation Network volunteers)
- **Topic-related articles** → they enhance the process of documentation essential for a good translation (links to NASA articles)
- **Videos** → they can deepen the understanding of certain topics in a more dynamic way (Tedx talks, YouTube channels, documentaries)
- **Translation-related articles** → they contribute to improve translation techniques and find solutions to certain problems a user might encounter
- **Online courses** (Khan Academy, Coursera)
- **Applications** (Oxford Dictionary of Astronomy, Science Direct)
- **Search engines** (Wolfram Alpha)

The future platform could integrate a new "Online Resources" page, featuring links for these resources sorted by language and/or domain. Ideally, this page could be editable, and volunteers could add as many resources as they know/want.

7. Conclusion

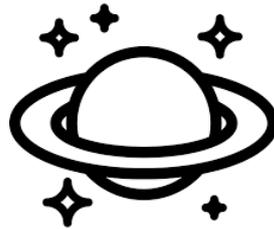
These recommendations can be given to a web design team.

The PRA 5 CIT team would like to thank you for this opportunity to put our skills and competences to use.

This project has been extremely interesting for us, both as future translators and platform designers.

We also wish to thank you for your trust and availability throughout this project. Your feedback, corrections and guidance were extremely appreciated.

We hope our ideas and recommendations have met your expectations and we wish the platform will host of a thriving community of astronomers and translators!



8. References

UX Design:

- UX Mind- User Experience Blog, <https://uxmind.eu/portfolio/ux-design-and-evaluation-cards/> (website in French)
- **LALLEMAND Carine, GRONIER Guillaume**, *Méthode de design UX*, Eyrolles, 2015
- **NORMAN Don**, *3 ways good design make you happy*, TED2003
https://www.ted.com/talks/don_norman_on_design_and_emotion

Translators Assessment Grid:

- **ATA Certification Program**, *Rubric for Grading*,
http://www.atanet.org/certification/aboutexams_rubic.pdf, Version 2011

Appendix

Sample of the Astronomy Translation Network Survey- Platform design

Astronomy Translation Network- Questions for the Platform design

We are five French students conducting a research project about the Astronomy Translation Network. The goal is to find out the pros and cons of the platform you already use, so that we can make it better.

Following is a series of 9 questions about your needs as a user of this translation project management tool.

Completing this Survey will only take you about 5 minutes.

The results of our research project will be published on the website of the Astronomy Translation Network.

Thank you for taking the time to complete this survey.

***Obligatoire**

1) What is your native language? *

Votre réponse

2) What is your role in the network? (Please tick ALL the boxes that apply) *

- Language coordinator
- Translator
- Proofreader
- Project manager
- Scientific reviewer

3) What is the most important information you look for when choosing a document to translate/review (other than the source and target language)? (Please tick ALL the boxes that apply) *

- Topic
- Level of expertise
- Nature of the document (article, video, table, infographics, etc)
- Author
- Source
- Task needed (translation, revision, reviewing)
- Due date
- Autre : _____

4-a) How satisfied are you with the interactions with your team (translators, proofreaders, scientific reviewers, language coordinators, project manager)? *

- Very dissatisfied
- Slightly dissatisfied
- Slightly satisfied
- Very satisfied

4-b) Could you explain why?

Votre réponse _____

5) Which features of Basecamp do you use the most? (Please tick ALL the boxes that apply) *

- Message boards
- To-do assignments
- Schedules
- Real-time chats (Campfires)
- Check-in questions
- Documents and file-storage
- E-mailing
- Reports
- Direct messages (pings)
- Notifications
- Search
- Autre : _____

6) How would you rate Basecamp in general out of 10? (10 being the best) *

0 1 2 3 4 5 6 7 8 9 10

Entirely unsuitable Perfectly suitable

7) Choose 4 cards according to your needs as a user of a translation management platform. *



I need to have fun, to discover new things, to enjoy and experience new sensations



I need to have regular and close contact with people, to interact with them, to feel like I am part of a community



I need to know that I am safe from threats and I control my environment



I need to achieve goals and objectives, to acquire new skills and master hard challenges



I need to take responsibilities, work in my own time and not be pressed or influenced to do things



I need to have an impact and be a factor of influence for people around me



- I need to feel like I have a purpose, like I can make a difference and develop creativity

8) Select up to four needs that you consider not fulfilled on Basecamp. *

- Be challenged and stimulated
- Feel like a part of the ATN team
- See that my work is controlled by other people
- Show that I am effective and competent
- Show that I am effective and competent
- Be autonomous and independent
- Gain in popularity
- Be able to show my potential
- Basecamp answers all my needs

9) Do you have any suggestions in terms of functionalities that you would like to see on the future Astronomy Translation Network Platform?

Votre réponse

Thank you so much for your time and involvement!

ISIT (<http://www.isitinternational.com/>)

CIT Promotion (Intercultural Communication and Translation) 2018

Dedoteraux Leticia, Xiao-Tung Léa, Leprince Alexane, Béharelle Alice, Himmelfarb Bérénice