Global Under-Resourced MEedia Translation (GoURMET)

H2020 Research and Innovation Action
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D7.3 – Internal progress and planning report

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Abstract

The aim of this deliverable to assess the performance of the project during the first reporting period in terms of the project objectives and milestones, and to review the potential risks to the project implementation. Based on this analysis we review the plan for the second period of the project, and discuss whether any modifications are required in order to achieve the project objectives.

1   Introduction

The aim of this deliverable to assess the performance of the project during the first reporting period in terms of the project ojectives and milestones (Section 1.3.4 of Annex 1 to the Grant Agreement), and to review the potential risks to the project implementation that were identified in Section 1.3.5 of Annex 1. Based on this analysis we review the plan for the second period of the project, and discuss whether any modifications are required in order to achieve the project objectives.

The project is proceeding well, and all the objectives for the first reporting period have been met. There has been a delay in two of the milestones due to the COVID-19 pandemic.

We are requesting a three month extension to the project due to COVID-19. In the project so far, we have been able to complete most of the work of the projet on time. Looking to the second half of the project, due to restrictions on travelling and extra caring responsabilities, some of the non-core work in the project will need to be delayed by a few months. We propose a delay of 3 months for the last tranche of deliverables. We expect that the core milestones related to delivering translation models and their evaluation will continue with little change to their schedule, but we propose a 3 month postponement for most of the non-core milestones. This will give us more time to successfully co-ordinate events related to dissemination and exploitation.

2   Objectives

We have made significant progress towards achieving the objectives of the project. In the first half of the project we have completed two full cycles of research, data collection, system building, deployment and evaluation. In the second half of the project we will focus on delivering more high quality research to our user partners, and on engaging with the Media Industry to promote our tools and research and ensure that the GoURMET project outputs have an impact beyond the end of the project.

1. **Development of a high-quality machine translation for under-resourced language pairs and domains:** We have developed translation models all languages for the first two rounds of language. The first round of languages were: Bulgarian, Turkish, Swahili, Gujarathi. And the second round of languages were: Tamil, Serbian, Amharic, Kyrgyz. We have compared these languages to Google translate with mixed results, and we have submitted Gujarati systems to the WMT 2019 news translation shared task where we came first for English-Gujarati and second for Gujarati-English in the constrained track.

2. **Adaptable to new and emerging languages and domains:** We have contributed to toolkits which crawl the web to collect parallel data for low-resourced languages. In the second half of the project we will focuss more on this objective, with the planned surprise language evaluation.

3. **Development of tools for analysts and journalists** We have developed an interface which allows users to directly use the translation models. This is an objective which we will work on in the second half of the project. We needed to get models in place, and the platform deployed before we could work on tools for journalists that use these services.

4. **Sustainable, maintainable platform and services:** We have developed a translation platform which uses the latest technology stack, hosted by AWS and using microservices and scalable lambda services. We will continue to improve this platform in the second half of the project, focussing on making it faster and expanding the API.

5. **Dissemination and communication of project results to stakeholders and user group**

   In this project we have successfully published research on a wide range of topics, including 19 papers accepted into conferences and workshops, with more under review, and in pre-print stage. We have presented the project at media industry events and European research events and we have participated in workshops related low-resource languages.

3 Milestones

Nine milestones were scheduled in the first period of the project. All milestones were met on time apart from the delivery and evaluation of one language pair from the second round of languages, English-Tamil, which has resulted in a delay for MS7 and MS8.

MS1 *First release of translation models* (M6 - completed)
The initial four language pairs, or eight translation models (into and out of English), were delivered to the BBC as docker modules for integration. These languages were Bulgarian, Turkish, Swahili and Gujarati. These languages were selected from a shortlist given by the BBC and DW, and two candidates from each user partner were selected. The academic partners then selected the languages that they were most interested in, with Alicante and Amsterdam choosing one each, and Edinburgh choosing two.

MS2 *Initial release of content creation user interface* (M8 - completed)
An interface for translating text using the translation platform was created. Additionally, two interfaces were created for gathering evaluations of machine translation. It was agreed to implement the gap filling and direct assessment evaluation interfaces, and leave the post-editing interface for the second half of the project.

MS3 *First evaluation of initial translation models* (M9 - completed)
The translation models were evaluated using the two interfaces developed above. Journalists with the correct linguistic skills were used to evaluate the output of machine translation models.

MS4 *Release of initial morphological models* (M12 - completed)
Software developed along with research in WP2 was released and is described in D2.1 Initial progress report on modelling morphological structure.

MS5 *Release of initial structural models* (M12 - completed)
Software developed along with research in WP2 was released and is described in D3.1 Initial progress report on learning structural models.

MS6 *Release of initial transfer learning approaches* (M12 - completed)
Software developed along with research in WP2 was released and is described in D4.1 Initial progress report on learning structural models.

MS7 *Second release of translation models* (M15 - postponed to M18, completed)
The second four language pairs were Tamil, Serbian, Amharic and Kyrgyz. Apart from Tamil, all models were delivered to the BBC on time. The Tamil model performance at the time of this deadline was poor and we decided to keep improving it. We have been working towards a submission of the Tamil model to the WMT 2020 shared task competition and we have now delivered this model to the BBC.

MS8 *Second evaluation of translation models and user interface* (M18 - postponed to M20)
Gap filling evaluation of Kyrgyz and Serbian has completed and so has direct assessment of Serbian. The rest of the human evaluation is planned by M20.

MS9 *Initial release of project data* (M18 - completed)
This is reported in Deliverable 1.3. Inital release of project data.

The remaining core milestones (the delivery and evaluation of translation models) are largely unchanged, but most other milestones have been replanned – postponed by three months. This aligns with our request for a project extension of three months.

MS10 *Surprise language evaluation* (M24 - replanned to M27)
> We have started to plan for this event. An innovation committee has been created and we have monthly meetings. The purpose of the innovation committee is to maximise the impact of the project's scientific work, both within our user partners and more broadly with external stakeholders.

MS11 *Release of data gathering and augmentation tools* (M24 - replanned to M27)
> These next four milestones are all replanned for three months later. This will give us more time to take these projects to a more mature status.

MS12 *Release of morphological structural models* (M24 - replanned to M27)

MS13 *Release of morphological models trained using transfer learning approaches* (M24 - replanned to M27)

MS14 *Release of structural models trained using transfer learning approaches* (M24 - replanned to M27)

MS16 *Third release of translation models* (M24)
> We will keep the original deadline for M16. This is important to allow us to fit in the four rounds of model building and evaluation foreseen in the project. We have already decided on the round three languages: Hausa, Igbo, Macedonian and Tigrinya, and we have begun crawling for monolingual and parallel data.

MS15 *Hackathon event* (M26 - replanned for M29)
> The hackathon event will be delayed to minimise the impact of any COVID-19 related stakeholder priority changes and travel restrictions.

MS17 *Improved prototypes for content creation and media monitoring use cases* (M24)
> This milestone is important to keep in place as much of the evaluation work will rely on having user interfaces to interact with.

MS18 *Third evaluation of models and platform* (M27 - replanned for M30)
> We have added extra time for the evaluation of this round as the fourth round of languages can still go ahead while waiting for the results.

MS19 *Final release of combined research of WP1,2,3,4* (M30 - replanned for M36)
> We are giving this milestone as much extra time as possible while still being able to disseminate these results in the last three months of the project.

MS20 *User group dissemination event* (M31 - replanned for M35)
> For the same reasons we delayed the hackathon, other dissemination events have been pushed forward.

MS21 *Fourth release of translation models* (M32 - replanned M34)
   We have planned a small delay here which still allows time for evaluation.

MS22 *Fourth evaluation of models and platform* (M36 - replanned M38)

MS23 *Final use case demonstrators* (M36)
   Finishing the prototypes will allow us time to disseminate our results in the final three months
   of the project.

MS24 *Final release of project data* (M36 - replanned for M39)
   These final two milestones will benefit from a small extention.

MS25 *Sustainability plan* (M36 - replanned for M39)

4 Risks

We identified a number of potential risks to the project. Here we assess each one and update its likelihood and possible severity.

R1 *Britain leaves the EU during the period of the project*
The UK's Department for Business, Energy and Industrial Strategy is still committed to paying grantees directly, so that projects are not interrupted by Brexit.
Likelihood: high; Severity: low

R2 *Insufficient research progress*
Research progress has been excellent so far.
Likelihood: low; Severity: low

R3 *Partner withdrawal*
No partners have left the consortium and all have shown strong commitment.
Likelihood: low; Severity: high

R4 *Partner under-performing*
The performance of all partners has been excellent, in terms of quality of work and timeliness of execution.
Likelihood: low; Severity: low

R5 *Underestimation of required effort*
Most milestones so far have been achieved on time and on budget, and we believe this will continue until the end of the project.
Likelihood: low; Severity: low

R6 *Project is not delivered to time*
Even with the COVID-19 pandemic, most milestones have been on-time, and we have made substantial progress to the upcoming milestones. We have asked for a no-cost extension to the project of three months and we have replanned milestones and deliverables to minimise its impact on our research and innovation work.
Likelihood: low; Severity: low

R7 *Development runs late*
So far development for the first two use cases has proceeded at least as well as planned, and we anticipate this will continue for the third use case.
Likelihood: low; Severity: low

R8 *Visualisation and User Interface not compatible with user partners' operational workflow*
Feedback has been positive so far, and our approach enables us to flexibly adapt to user requirements. Likelihood: medium; Severity: low

5 Conclusion

The project is proceeding well, and the objectives for the first reporting period have been met. A three month extension to the project has been requested. All deliverables and many milestones will be postponed by three months, although the core work of the project will proceed largely unchanged. We have updated our risk analysis for the project and there are no risks with high likelihood and high severity.

A   Summary of Extension Request

Deliverable Extension

Del Rel. No	Del No	Title	Description	Lead Beneficiary	Nature	Dissemination Level	Est. Del. Date (annex I)	Receipt Date	Status	Proposed new Date
D6.1	D18	Project fact sheet	Project fact sheet	DW	Websites, patents filling, etc.	Public	31 Jan 2019	07 Mar 2019	Submitted	
D1.1	D1	Survey of relevant low-resource languages	Survey of relevant low-resource languages	UA	Report	Public	30 Apr 2019	30 Apr 2019	Submitted	
D6.2	D19	Project web portal	Project web portal	DW	Websites, patents filling, etc.	Public	30 Apr 2019	30 Apr 2019	Submitted	
D5.1	D12	Evaluation Plan	Evaluation Plan	BBC	Report	Public	30 Jun 2019	28 Jun 2019	Submitted	
D5.2	D13	Use Case Description and Requirements	Use Case Description and Requirements	BBC	Report	Public	30 Jun 2019	27 Jun 2019	Submitted	
D7.2	D23	Data Management Plan	Data Management Plan	UEDIN	ORDP: Open Research Data Pilot	Public	30 Jun 2019	23 Jun 2019	Submitted	
D7.1	D22	Ethics review	Ethics review	UEDIN	Report	Confidential, only for members of the consortium (including the Commission Services)	31 Dec 2019	19 Dec 2019	Submitted	
D1.2	D2	Initial progress report on data gathering and augmentation	Initial progress report on data gathering and augmentation	UA	Report	Public	30 Jun 2020		Pending	
D1.3	D3	Initial release of project data	Initial release of project data	UA	ORDP: Open Research Data Pilot	Public	30 Jun 2020		Pending	
D2.1	D6	Initial progress report on modelling morphological structure	Initial progress report on modelling morphological structure	UEDIN	Report	Public	30 Jun 2020		Pending	
D3.1	D8	Initial progress report on learning structural models	Initial progress report on learning structural models	UVA	Report	Public	30 Jun 2020		Pending	
D4.1	D10	Initial progress report on transfer learning	Initial progress report on transfer learning	UEDIN	Report	Public	30 Jun 2020		Pending	
D5.3	D14	Initial progress report on integration	Initial progress report on integration	BBC	Report	Public	30 Jun 2020		Pending	
D5.4	D15	Initial progress report on evaluation	Initial progress report on evaluation	BBC	Report	Public	30 Jun 2020		Pending	
D6.3	D20	Interim Dissemination and Exploitation Report	Interim Dissemination and Exploitation Report	DW	Report	Public	30 Jun 2020		Pending	
D7.3	D24	Internal progress and planning report	Internal progress and planning report	UEDIN	Report	Public	30 Jun 2020		Pending	
D1.4	D4	Final progress report on data gathering and augmentation	Final progress report on data gathering and augmentation	UA	Report	Public	31 Dec 2021		Pending	31-Mar-2022
D1.5	D5	Final release of project data	Final release of project data	UA	ORDP: Open Research Data Pilot	Public	31 Dec 2021		Pending	31-Mar-2022
D2.2	D7	Final report on modelling morphological structure	Final report on modelling morphological structure	UEDIN	Report	Public	31 Dec 2021		Pending	31-Mar-2022
D3.2	D9	Final report on learning structural models	Final report on learning structural models	UVA	Report	Public	31 Dec 2021		Pending	31-Mar-2022
D4.2	D11	Final report on transfer learning	Final report on transfer learning	UEDIN	Report	Public	31 Dec 2021		Pending	31-Mar-2022
D5.5	D16	Final progress report on integration	Final progress report on integration	BBC	Report	Public	31 Dec 2021		Pending	31-Mar-2022
D5.6	D17	Final progress report on evaluation	Final progress report on evaluation	BBC	Report	Public	31 Dec 2021		Pending	31-Mar-2022
D6.4	D21	Final Dissemination and Exploitation Report	Final Dissemination and Exploitation Report	DW	Report	Public	31 Dec 2021		Pending	31-Mar-2022
D7.4	D25	Sustainability plan	Sustainability plan	UEDIN	Report	Confidential, only for members of the consortium (including the Commission Services)	31 Dec 2021		Pending	31-Mar-2022

Milestone Extension

Milestone	Title	Lead Beneficiary	Current Delivery Date	Proposed Delivery Date
1	First release of translation models	UEDIN	30/06/2019	
2	Initial release of content creation user interface	BBC	31/08/2019	
3	First evaluation of initial translation models	BBC	30/09/2019	
4	Release of initial morphological models	UEDIN	31/12/2019	
5	Release of initial structural models	UVA	31/12/2019	
6	Release of initial transfer learning approaches	UEDIN	31/12/2019	
7	Second release of translation models	UEDIN	31/03/2020	31/07/2020
8	Second evaluation of translation models and user interface	BBC	30/06/2020	31/08/2020
9	Initial release of project data	UA	30/06/2020	
10	Surprise language evaluation	UEDIN	31/12/2020	31/03/2021
11	Release of data gathering and augmentation tools	UA	31/12/2020	31/03/2021
12	Release of morphological structural models	UEDIN	31/12/2020	31/03/2021
13	Release of morphological models trained using transfer learning approaches	UEDIN	31/12/2020	31/03/2021
14	Release of structural models trained using transfer learning approaches	UVA	31/12/2020	31/03/2021
16	Third release of translation models	UEDIN	31/12/2020	
17	Improved prototypes for content creation and media monitoring use cases	BBC	31/12/2020	
15	Hackathon event	DW	28/02/2021	31/05/2021
18	Third evaluation of models and platform	BBC	31/03/2021	30/06/2021
19	Final release of combined research of WP1,2,3,4	UEDIN	30/06/2021	31/12/2022
20	User group dissemination event	DW	31/07/2021	31/11/2021
21	Fourth release of translation models	UEDIN	30/08/2021	31/10/2021
22	Fourth evaluation of models and platform	BBC	31/12/2021	28/02/2022
23	Final use case demonstrators	BBC	31/12/2021	
24	Final release of project data	UA	31/12/2021	31/03/2022
25	Sustainability plan	UEDIN	31/12/2021	31/03/2022

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