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# **RENDER**

# Deliverable D6.2.2

# Report on community building activities Y1

Editor:	Fabian Flöck, Karlsruher Institut für Technologie (KIT)
Author(s):	Fabian Flöck, KIT; Angelika Adam, Wikimedia; Denny Vrandečić, KIT
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Editor (Name, Affiliation)	Fabian Flöck, Karlsruher Institut für Technologie (KIT)
Work package Leader (Name, affiliation)	Ioan Toma, UIBK

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## **Executive summary**

This deliverable reports on the activities regarding community building for the diversity toolkit and Web 2.0 platforms in the first project year. We describe the main reasons why it is essential to build up a working community of dedicated users and developers for the knowledge diversity technology of RENDER to have a noticeable impact on the way collaboration in Web 2.0 platforms functions. It is also explained how we are going to do this and what we have done so far in this respect.

For installing a community for the diversity extension for MediaWiki, exemplified by the Shortipedia prototype, our main focus was on participating in various community events. Furthermore, as Semantic MediaWiki and Shortipedia are essential parts of the official "Wikidata" project, we use this fact to leverage the community outreach even more. We took part in the Semantic Web Challenge 2010 where Shortipedia reached the third place. In an invite-only, small-scale meeting organized by Tim O'Reilly we were involved in the discussion if and how to integrate parts of the Shortpedia code and Semantic MediaWiki into Wikipedia (Wikidata), an endeavor we are still part of. At the SemTech 2011 and ESWC 2011 conferences we presented Shortipedia to the Semantic Web community. We also presented it to different developer and user communities revolving around MediaWiki (MediaWiki Hackathon 2011: MediaWiki developers; Wikimania 2011: wider Wikipedia community; SMWCon 2011: SMW developers and users). A paper describing Shortipedia was published in the Semantic Web Journal.

For the Drupal extension we devised a strategy how to reach existing communities and build up a "Knowledge Diversity in Drupal" initiative in four steps. We want to harness the existing expertise inside the Drupal development groups. Therefore, in a first phase (ending soon) we are only informing without actively approaching, but have identified the most promising collaborators to focus our efforts on. In the second phase, we contact chosen groups with the finished first prototype, example-code and roadmap for further development and collect ideas and devise a collaboration plan. In the third step we set up a dedicated knowledge diversity initiative, deepen the collaboration and significant efforts in building diversity-enabling extensions will be made by the community. We will present results of the work at the major Drupal events. Phase 4 will be all about retreating from the community and hand it over completely to the Drupal users. We expect the developer community to contribute, since there is a multitude of use cases for knowledge diversity tools beside our own. Even more so as many of those use cases are suited for commercialization through the many web design and development agencies offering Drupal as a customized solution to their clients.<sup>2</sup>

For the Twitter analysis tool build on Microsoft Pivot Viewer in the second year, we are investigating how to approach the Silverlight community, which is the base for MS Pivot Viewer. The unique combination of a powerful online data navigation and visualization tool with the new RENDER diversity mining technology and data output is very promising to attract collaborating developers.

In the case of Wikipedia, the community is already large and very active. In the first year of the RENDER project we focused our main activities in this deliverable on the spread of information to call attention to the project. We wanted to awake the interest and enthusiasm of the Wikipedia community for the project and to support our work by highlighting the project objectives. We used several communication channels to reach the community. We published the working progress in monthly blog entries, established a community website and gave introductions to RENDER on conferences and workshops, which are related to the Wikipedia community.

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<sup>1</sup> http://meta.wikimedia.org/wiki/New Wikidata

<sup>&</sup>lt;sup>2</sup> All Drupal extensions stay under the GPL license terms.

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# **Abbreviations**

CMF Content management framework

CMS Content management system

ESWC Extended Semantic Web Conference

GPL General Public License

KIT Karlsruhe Institute of Technology

LOD Linked Open Data

MS Microsoft

RDF Resource Description Framework

UI User Interface

URI Unique Resource Identifier

WP Work Package

SMW SemanticMediaWiki

## 1 Introduction

This deliverable reports on the activities regarding community building for the diversity toolkit and Web 2.0 platforms in the first project year.

If the knowledge diversity technology in RENDER is expected to have a noticeable impact on the way collaboration in Web 2.0 platforms functions, it is essential to build up a working community of dedicated users and developers for two main reasons:

- 1. Secure sustainability by establishing acceptance: As good as the technology may be, if it is not accepted by the users and advertised internally by the community, no one will use it, build up on it or maintain it in the long run. To succeed with this task requires the community's understanding of the importance and the potential use of diversity-enabling features. It also requires the absorption of knowledge diversity as a central topic into the community's agenda (instead of be perceived as a nice, but one-time extension from an external project) if it is supposed to be a sustained component of the ongoing development of the platform in question.
- Acquire knowledge of the communities' needs for building high quality extensions: Producing
  customized, high quality extensions that are useful for the community requires knowledge of the
  users' needs. Thus it is essential to learn which features are crucial for end-users to actually use
  the technology and what is important to developers so they will adopt and develop the technology
  further.

Task 6.2, which this deliverable is part of, is therefore aimed at building up communities for the RENDER tools and extensions. Having a supporting community around the RENDER tools, which makes diversity in the respective Web 2.0 platform their main goal, is crucial for the long-term maintenance and advancement of the RENDER technology. The aim is to set up and maintain a community that is engaged in discussion around the project that actively contributes feedback and contributes via the project's open source strategy. Especially the knowledge about how to design successful tools tailored at the specific community needs and regarding the optimal integration of project results can be harnessed from the respective communities. Developers will be encouraged and be provided all necessary material and support to re-use RENDER technology for their very own knowledge-diversity based tools.

The targeted users are those in the existing communities of the extensions developed in WP 4, as well as the community of the Wikipedia use case. Instead of trying to build up a completely new, unified community around the RENDER tools and the knowledge diversity topic, we are approaching existing subgroups and projects, which show affinity to the technology RENDER is using as well and which are most likely to cooperate in a long-term. We describe which groups we targeted as follows. Section 2 describes the community approach for the communities in WP 4, while section 3 covers Wikipedia.

The ways we use to reach the communities are: postings and discussions inside the existing communities, participation in active mailing lists, setting up of own forums and mailing lists where necessary, access to the RENDER tools' code, a website with general information how to get involved, visiting the core community events and giving talks, presentations and tutorials and engage in discussion about the RENDER goals and technology. On the RENDER website, we have already set up sub sites for the tools' respective communities, including news and forums for information, questions and discussion (Figure 1).

When approaching the communities, it is crucial to communicate the intentions of RENDER in the right way, i.e. stressing the open source character of the technology developed as well as the will to take into serious account the input from the community for further developments. And, not least, the clear goal of leaving the community in charge of the technology after the end of the project, responsible for its maintenance and improvement. One part of this communication process will as well be to "sell" the idea of knowledge diversity for the respective platform to its users, and the benefit that can be drawn from the technology.



Figure 1: Extension and community sub site (MediaWiki example)

### 2 Extensions to Web 2.0 Platforms

### 2.1 Diversified MediaWiki

With Shortipedia as the showcase for a diversified wiki we approach the existing, very active developer and user communities of MediaWiki<sup>3</sup> and Semantic MediaWiki (SMW)<sup>4</sup>. Furthermore we are in talks with the Wikimedia foundation to integrate part of the functionalities of Shortipedia and Semantic MediaWiki in Wikipedia, which would expose these features to the whole Wikipedia community. This project, called "Wikidata", has been developed within the RENDER project as a proposal for the Wikimedia community. We have now published the technical proposal in its full detail.<sup>5</sup>

We have so far presented the possibilities of the technology of Shortipedia at the following events:

The Semantic Web Challenge 2010, Shanghai, China: This was the first public presentation of Shortipedia. We received the award for third place in the challenge.

Semantic Web Journal, 2011: Published an article describing Shortipedia.<sup>6</sup>

"Structured Data in Wikipedia", 2011, Sebastopol, CA: An invite-only, small-scale meeting organized by Tim O'Reilly of O'Reilly Media. The focus was to discuss the strategy to bring structured data to Wikipedia via the Wikidata project. Extensions and rewrites of Shortipedia and Semantic MediaWiki will form an essential technical foundation for Wikidata.

SemTech Conference 2011, San Francisco, California: Tutorial for Semantic MediaWiki given (1/2 days).

ESWC 2011, Crete, Greece: Half-day tutorial co-hosted by Denny Vrandečić on "Combining the Social and the Semantic Web" where he presented work from the RENDER project, primarily Shortipedia.

MediaWiki Hackathon 2011, Berlin, Germany: Presentation of Shortipedia to the MediaWiki developer community.

Wikimania 2011 in Haifa: Presentation to the wider Wikipedia community about Shortipedia and the ideas to integrate the functionalities of Shortipedia and SMW into Wikipedia. The Wikipedia community was extremely positive about the proposal. A video of the talk is now available.<sup>7</sup>

SMWCon 2011, Berlin: Presentation to the SMW developer community and SMW users about Shortipedia and the ideas to integrate the functionalities of Shortipedia and SMW into Wikipedia.

Due to the positive reaction of the overall community so far, we are optimistic that there exists a broad interest in contributing to the project. We furthermore expect the community to offer comments and advice as soon as we start the implementation phase of Wikidata. During the build up of Wikidata itself we have detailed an incentives architecture that is mostly built on increasing the quality of Wikipedia and increasing the effectiveness of its editors. The incentives architecture is part of the full Wikidata proposal mentioned above.

## 2.2 Drupal

The Drupal developer community is large and very active, with more than 661,000 user accounts and over 10,000 developer accounts as of September 1<sup>st</sup>, 2011.<sup>8</sup> There is a strong focus of activity on free

<sup>&</sup>lt;sup>3</sup> http://www.mediawiki.org

<sup>&</sup>lt;sup>4</sup> http://www.semantic-mediawiki.org

<sup>&</sup>lt;sup>5</sup> http://meta.wikimedia.org/wiki/New\_Wikidata

<sup>&</sup>lt;sup>6</sup> See Appendix A for the paper: "Shortipedia - Aggregating and Curating Semantic Web Data"

<sup>&</sup>lt;sup>7</sup> http://www.youtube.com/watch?v=4R4AQAPYLqk

<sup>8</sup> http://www.drupal.org

community-contributed addons, known as contrib modules<sup>9</sup>, one of which we will be developing for RENDER. The semi-annual Drupal Conference DrupalCon hosted over 3,000 attendants in March2011. There is a wide variety of online community channels we can and will use.

For addressing the Drupal developer community we devised a strategy to first target RDF and semantic related developer projects and groups, as the RENDER extensions for Drupal are based on semantic technology. We will of course raise the awareness of the whole Drupal community to the topic by targeting other forums and events as well in a later stage. But instead of trying to target a broad range of developers at once or building our own Drupal developer initiative right away, we begin with focusing our efforts on groups that are very active and most likely to take up the idea and to advance and spread it.

The ones most active and suited for collaboration in our case have been identified as the "Semantic Web" Group<sup>10</sup> and the "RDF in Drupal 7 initiative"<sup>11</sup>.

The plan to approach and work with the community is thus divided into the following steps:

#### Phase 1:

Give out general information, ask for input, discussion: We have set up a sub-site of the RENDER website<sup>12</sup> explaining the planned extensions, giving up-to-date information about the latest advancements and the ways to take part in the project. This is possible by posting ideas, questions and getting involved in discussions. We also mark our relevant blog-posts to be included at Planet Drupal.<sup>13</sup> We decided to not approach the developer groups actively before a first prototype (something "hands-on") is ready that can be presented and before a clear development plan has been put into place, as it is important to sent a clear message about the roadmap and plans for the extension when initiating the collaboration.<sup>14</sup> It also helps to avoid a gap in activity after the first introduction of the idea to the groups, as the community would then quickly lose interest. We are currently approaching the end of this phase.

#### Phase 2:

Approach core groups, lay out development roadmap, ask for input, establish collaboration: With the prototype and a development plan we are approaching the two above mentioned groups and establish an intense exchange about those as well as possible future work. From the beginning we will stress the goal of the project: that is that the diversity tools for Drupal are supposed to become an integral part of the Drupal contrib modules and that we will leave the community in charge of it at the end of the project. We will give the members full access to our current developments, incentivize them to make own developments and take their considerations, ideas and critique into serious account. As soon as possible we hope to spawn first community-originated tools and valuable input for our proposed further advancements. We will install mailing lists and make available the prototype code at this stage to coordinate the beginning cooperation and to answer questions and requests about our technology in time. We will also try to get featured as much as possible in Community Spotlight through the constant communication of our latest advancements inside the groups, forums, in blog postings and on the RENDER website.<sup>15</sup>

<sup>12</sup> See D6.2.1. The website will of course be adapted as the community evolves. See also Figure 1.

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<sup>&</sup>lt;sup>9</sup> These modules are the typical way how to extend Drupal Core functionalities. Significant community activity evolves around developing and improving those modules. Currently there have been developed over 11,000 of these modules.

<sup>10</sup> http://groups.drupal.org/semantic-web

<sup>&</sup>lt;sup>11</sup> http://semantic-drupal.com

<sup>&</sup>lt;sup>13</sup> http://drupal.org/about/drupal-planet - Planet Drupal is an aggregated list of feeds about Drupal from all over the web.

<sup>&</sup>lt;sup>14</sup> This is crucial as else, the reputation of RENDER as a serious and valuable partner for the community cannot be guaranteed and the collaboration might die out after an initial burst of interest.

<sup>&</sup>lt;sup>15</sup> http://drupal.org/community-spotlight - The Community Spotlight highlights Drupal community members and teams in short articles.

To generate initial community activity, we will also set up a "Diversity in Drupal Challenge". This challenge will award developers who further advance RENDERs Drupal extensions or build their own extensions consuming diversity data generated by RENDER.

#### Phase 3:

**Deepen collaboration, have community develop their own extensions and take leader roles:** At this phase a constant interaction has been established, taking place mostly at inside the respective groups. Drupal developers are collaborating actively with RENDER team members on testing and bugfixing the now ready RENDER prototypes and developing their own extensions using technology provided by RENDER. They are at least equally involved in terms of effort and leadership.

Install "Knowledge Diversity in Drupal" initiative, broaden scope: As a roof to host all relevant information under, we plan to set up a "Knowledge Diversity in Drupal" initiative in the community space at Drupal.org, which will be a frame for existing collaborators and help to acquire new contributors from other parts of the community. Drupal community members will take leading roles in this.

**Present extensions and results at Drupal events:** Once prototypes are ready to use in an alpha or beta stage, we will present them at DrupalCon, DoitwithDrupal and other conferences and (in)official Drupal camps.

#### Phase 4:

**Pass leadership to community:** After giving the lead for the "Knowledge Diversity in Drupal" project gradually to the community, latest at the end of Y3, RENDER will completely step out. Ideally, this part of the project will be maintained and advanced by the Drupal community.

The reason why we think the Drupal developer community will take up the knowledge diversity idea and technology is that beyond the uses cases covered by RENDER,<sup>16</sup> there are many more scenarios where similar extensions will be of huge benefit. One of those is authoring in big (e.g. news or public<sup>17</sup>) organizations using Drupal as a CMS, where it is crucial that the editors write content that is not biased in any direction. A diversity-aware tool can ease that process by showing authors their potential bias while writing. Targeted advertisement is another scenario, giving a web master running a Drupal powered forum (or other discussion space) the possibility to show ads tailored to the opinion and facts covered in e.g. a forum thread. The listing functionality (based on the "Views" module) in Drupal, that e.g. lists articles (or any other Drupal data) is widely used and could be customized with a new approach listing viewpoints or using sorting/clustering based on other diversity-related aspects. This functionality would make navigation in content-heavy sites much easier and offer a new browsing experience.

Apart from volunteer developers, there is a large number of web development and design agencies specialized on selling their customers Drupal solutions tailored to their specific needs. These agencies often customize Drupal components or develop their own to fit the clients needs. All developed Drupal modules fall as well under the GPL terms. With the above-described use cases and many other possible scenarios for knowledge diversity tools in Drupal, we are positive that this will generate significant additional developer activity, as the selling point for these extensions is quite strong.

### 2.3 Twitter & MS Pivot Viewer

The planned prototype for visualizing and navigating metadata (see D4.1.1) to be developed in Year 2 will be based on Microsoft PivotViewer, which is available as a control for the Internet application framework Microsoft Silverlight. We will therefore target specific Silverlight online communities for developers and

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<sup>&</sup>lt;sup>16</sup> See D4.1.1

<sup>&</sup>lt;sup>17</sup> Prominent examples being http://www.ecnomist.com and http://www.whitehouse.gov

end-users, which we are monitoring and devising a detailed community building plan for at the moment. The technology will be prepared for easy reuse. We will thus focus on explaining the possibilities of implementing this tool for exploring information diversity on any website embedding MS Silverlight. As the tool offers a very easy way to consume Twitter data preprocessed by RENDER technology and to offer the diversified contents to website visitors, we expect a significant use by website admins, for example news outlets that want to offer their readers diversity-enriched Twitter news streams.

Furthermore, we will encourage developers to expand the tool's capabilities to process other diversified data. There will be no other free, customizable tool available that combines the elaborated data visualization and browsing techniques offered by MS PivotViewer with the ability to directly consume online data from RENDER's unique diversity-mining techniques and can be integrated easily into websites. Thus, for Silverlight developers with any interest in data visualization techniques or opinion mining, sentiment analysis and such, it will be a very attractive candidate for reuse, customization and enhancement.

## 3 Wikipedia

The Wikipedia community is already a large and very active community. In the first year of the RENDER project we focused our main activities in this deliverable 6.2.2 to the spread of information to call attention to the project. We wanted to awake the interest and enthusiasm of the Wikipedia community for the project and to support our work by highlighting the project objectives.

Therefore we used several publishing channels:

- Wikimedia blog entries: At the end of each month, Wikimedia Deutschland is publishing a blog entry.<sup>18</sup> These entries contain a brief presentation of the activities in all associated projects. The current tasks and the working progress of the RENDER project were also introduced in this context. For several months, these reports are translated and additionally released on Wikimedia Meta-Wiki.<sup>19</sup>
- **Community information website:** This website provides a brief overview of Wikimedia Deutschland's tasks in the RENDER project, the current work packages and ideas. <sup>20</sup> The discussion page explicitly provides the opportunity for exchange, discussion and contact. <sup>21</sup> In addition, we have created a bibliography website, which is accessible from the RENDER page. <sup>22</sup> There we listed publications regarding diversity, quality and editor behaviour on Wikipedia. We demand readers with knowledge of further literature to add them, which has already be done my some.
  - Some words to the publishing location: We decided to establish this community information website at the Wikimedia Meta Wiki "the global community site for the Wikimedia Foundation's projects and related projects, from coordination and documentation to planning and analysis". RENDER is an international project and should therefore also involve the communities from different countries/language versions.
- Mailing lists: We informed the Wikipedia and Wikimedia community via several mailing lists (WikiResearch mailing List, WikiDE-list, VereinDE-list) and an entry in the German Wikipedia news portal Wikipedia:Kurier<sup>24</sup> about the publication of the RENDER community website on Meta wiki.

Additional, we presented and discussed the project in line with several workshops and conferences:

- A workshop, titled "Wikipedia & Research: The innovative character of Wikipedia research and the new challenges (and opportunities) associated with it" took place in the context of the Open Knowledge Conference on June 30th, 2011 in Berlin.<sup>25</sup> Mayo Fuster Morell, a member of the Wikipedia Research Committee, organized the workshop. About 50 persons participated. During the workshop Wikimedia Germany reported on the experiences of participating in a European research project namely RENDER and presented the basic ideas of the RENDER project. A short report of the workshop was also published.<sup>26</sup>
- **Wikimania** is the annual international conference of the Wikimedia community.<sup>27</sup> It took place from 4<sup>th</sup> to 8<sup>th</sup> August in Haifa, Israel. We introduced RENDER in the context of a workshop, where

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<sup>&</sup>lt;sup>18</sup> http://blog.wikimedia.de/category/geschaftsstelle/monatsberichte/ (accessed: 10.09.2011)

<sup>&</sup>lt;sup>19</sup> http://meta.wikimedia.org/w/index.php?title=Wikimedia\_chapters/Reports/Wikimedia\_Deutschland&oldid=2895844 (accessed: 20.9.2011)

<sup>&</sup>lt;sup>20</sup> http://meta.wikimedia.org/w/index.php?title=RENDER&oldid=2756357 (accessed: 10.09.2011)

<sup>&</sup>lt;sup>21</sup> http://meta.wikimedia.org/w/index.php?title=Talk:RENDER&oldid=2769451 (accessed: 10.09.2011)

<sup>&</sup>lt;sup>22</sup> http://meta.wikimedia.org/w/index.php?title=RENDER\_Bibliography&oldid=2762397 (accessed: 10.09.2011)

http://meta.wikimedia.org/w/index.php?title=Main\_Page&oldid=2869368 (accessed: 10.09.2011)

<sup>&</sup>lt;sup>24</sup> http://de.wikipedia.org/w/index.php?title=Wikipedia:Kurier&oldid=91688936 (publication version: 25.07.2011)

<sup>&</sup>lt;sup>25</sup> http://okcon.org/2011/programme/wikipedia-research-the-innovative-character-of-wikipedia-research-and-the-new-challenges-and-opportunities-associated-with-it (accessed: 10.09.2011)

<sup>&</sup>lt;sup>26</sup> http://meta.wikimedia.org/w/index.php?oldid=2761161 (accessed: 10.09.2011)

<sup>&</sup>lt;sup>27</sup> http://wikimania2011.wikimedia.org/w/index.php?title=Main\_Page&oldid=16573 (accessed: 10.09.2011)

about 40 persons participated.<sup>28</sup> This workshop is part of a video, which was published on YouTube.<sup>29</sup> We used the opportunity for exchanging and discussing with interested Wikipedians and different researchers.

WikiConvention is the annual community conference of the German Wikipedia and the other Wikimedia projects.<sup>30</sup> This conference took place in Nürnberg, Germany, from the 9<sup>th</sup> to 11<sup>th</sup> of September. There we used the chance to intensify our contact with the Wikipedia community and other interested participants to introduce RENDER and to discuss our ideas.

For our future community outreach, we are in contact with the Wikipedia Research Community. We plan to intensify this collaboration soon e.g. by placing RENDER topics in the recently started Research Newsletter and in reoccurring research initiatives, like the Wikimedia Summer of Research. The interest in this community is very high and we have already collaborated and exchanged best practices and tools with members of the Wikimedia Research Community regarding RENDER.

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<sup>&</sup>lt;sup>28</sup> http://wikimania2011.wikimedia.org/w/index.php?title=Submissions/Reflecting\_knowledge\_diversity&oldid=15522 (accessed: 10.09.2011)

<sup>&</sup>lt;sup>29</sup> http://youtu.be/tJXKJlguAhI (accessed: 10.09.2011)

<sup>&</sup>lt;sup>30</sup> http://de.wikipedia.org/w/index.php?title=Wikipedia:WikiConvention&oldid=93489043 (accessed: 10.09.2011)

## **Annex A**

# A.1 Paper: Shortipedia - Aggregating and Curating Semantic Web Data

Vrandecic, D.; Ratnakar, V.; Krötzsch, M. and Gil, Y. 2010. *Shortipedia: Aggregating and Curating Semantic Web Data*, in *Proceedings of the ISWC 2010*, Shanghai, China.

Link: http://www.cs.vu.nl/~pmika/swc/submissions/swc2010\_submission\_18.pdf