

Fostering an awesome tool ecosystem for the semantic web

Hilmar Lapp¹ and Rafael Gonçalves²

¹Duke University

²Stanford University

May 5, 2020

Session at the 2020 US2TS

Topic

Reusable software tools and libraries

Type of Session

Partly presentation, and partly break-out discussions. Specifically, if we can only get one 90 minute slot allocated, we will use at least 60-70 minutes for lightning talks presenting domain-agnostic tools (see “Speakers”), and use the remaining time for an interactive facilitated brainstorming discussion about actionable steps to improve the ecosystem. If we can get two 90-minute slots, we will fill one with lightning talks, and use the second for facilitated brainstorming and breakout discussions to identify major shortfalls of the ecosystem, and major actionable opportunities for improving it.

Description

One of the most deciding factors for how widely and quickly a data and information standard is adopted is the strength of its surrounding ecosystem of reusable, interoperating, and openly available software components. With an ecosystem programmers might call “awesome”, most or all problems unspecific to a particular application can be solved readily and confidently by combining components drawn from the ecosystem, similar to Lego™ blocks. For a software ecosystem to achieve this level of maturity, far more than the mere existence of problem-solving code or tools is required. As has been recognized for some time, the software ecosystem surrounding the semantic web technology stack is decidedly not awesome. Nevertheless, a plethora of software resources does exist, including tools that are widely used, highly mature, and that power major data resources.

In this session, we aim to highlight and raise awareness of some of the strengths of the semantic web software ecosystem, and identify major gaps, as well as actionable steps around which the community can coalesce to make the ecosystem more awesome. For example, the [Awesome Semantic Web](#) list enumerates hundreds of software resources, including databases, reasoners, and reusable programming modules, most of which open-source and freely available. Yet, it also suggests some of the major gaps, such as programming languages popular for building applications with only spotty support for the semantic web stack, and in general poor support for semantic web technologies beyond RDF and triple store databases.

This session will include short presentations of reusable tools and libraries solving problems across the semantic web technology stack, including in particular ones that, even though they are domain agnostic, are largely unknown outside of the field or domain in which they were created. For identifying major gaps and

actionable steps the community can rally around, we will facilitate brainstorming and discussion activities to surface obstacles, unmet needs, and other issues preventing awesomeness when developing for the semantic web.

Speakers

We will call for lightning talk-length (≤ 5 minutes) submissions describing reusable, openly available domain-agnostic software tools and libraries supporting one or more pieces of the semantic web technology stack. Examples include reasoners, parsers, format converters, pattern instantiating tools, etc.

Expected participation

The session is aimed primarily at developers and users, those developing components for the ecosystem, and those looking to peruse them, whether for building their own applications or as end users.