

# THETA

The Higher Education Technology Agenda

## Keynote 2015 – Martin Fenner

### **KISS goodbye to roadblocks in scholarly communication infrastructure**

ABSTRACT: There are many considerations that go into building scholarly infrastructure, but keeping things simple is typically not on that list. This keynote will go into the importance of simplicity for technical infrastructure, will show examples where this has gone wrong, and will look into the reasons why we tend to forget about simplicity.

The best infrastructure is invisible and we only notice it when something goes wrong. We don't need complex instructions or training to use it, and it can be easily fixed when something goes wrong. We have (for the most part) gotten used to this for our water, electricity and other utilities, but is this also true for our scholarly infrastructure? We can in fact see that in many cases simplicity was not a major consideration, think for example user interfaces for search or submission systems, the number of different standards for scholarly metadata, or protocols for data exchange.

In most cases a simple system is cheaper and faster to build and use than a complex system. So why is it that scholarly infrastructure often tends to be on the complex end of the spectrum? Part of the reason is the democratic process of how our standards evolve – we tend not to focus on the 80% of use cases that require 20% of the effort, but try to be inclusive and cover the 99%. Funding for infrastructure in the beginning is often project-based, and the incentives for funding large projects – possibly with multiple partners – can be in conflict with the effort to keep implementation costs down. And there is technical debt: it sometimes just is too expensive (or the expertise is not there) to rebuild systems originally implemented with technology or designs that are now outdated.

What can be done to change this situation? Raising awareness of the problem is a first step. There are many small decisions that go into designing and building a product, and we should constantly remind ourselves whether we really need more user choice, configuration options, etc., or whether a simple solution would do. It also helps tremendously to build infrastructure with change in mind: initial versions need not to be close to perfect, but they should be easy to adapt over time. Ultimately we will probably need a better alignment between the incentives for those building scholarly infrastructure and the satisfaction or frustration of

those using or building on top of this infrastructure.

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