

## Abstracts without papers

### **Lua<sub>T</sub>E<sub>X</sub>: how useful is FFI?**

*Hans Hagen and Luigi Scarso*

For a while we can now interface to external modules using the FFI mechanism, which has advantages as well as drawbacks. Here we will give an update on where we stand and how Con<sub>T</sub>E<sub>X</sub>t can (or might) use it.

### **CON<sub>T</sub>E<sub>X</sub>T: running remote**

*Hans Hagen*

When you want to use Con<sub>T</sub>E<sub>X</sub>t as a service you will face the problem that a run takes time and can block the parent process. The past decades we have come up with several solutions. Here I will present the approach we use currently.

### **CON<sub>T</sub>E<sub>X</sub>T: unexpected usage**

*Hans Hagen*

The development of Con<sub>T</sub>E<sub>X</sub>t (with Lua<sub>T</sub>E<sub>X</sub>) is a continuous process and is driven by user demands, changes in the ecosystem, like fonts, but also by personal needs. Because we're not talking of macros alone but also of a rather large library of Lua code, I can also run applications on top of Lua<sub>T</sub>E<sub>X</sub> with Con<sub>T</sub>E<sub>X</sub>t supporting them one way or another. In this talk I will discuss how I abuse the system in domotica.

### **CON<sub>T</sub>E<sub>X</sub>T: bidi**

*Idris Samawi Hamid, Luigi Scarso, Hans Hagen*

While Idris Samawi Hamid and Luigi Scarso are cooking up bidi in an editor, and Idris Samawi Hamid baking a new font, we also decided to further finetune right to left typesetting in Con<sub>T</sub>E<sub>X</sub>t. There is already a whole repertoire of (largely font related) features but many of them are dedicated to fonts and checking issues with fonts and open-type rendering (in engines). The low level system in Lua<sub>T</sub>E<sub>X</sub> has recently be cleaned up a bit too so this is a good moment to wrap up the state.

### **CON<sub>T</sub>E<sub>X</sub>T: side floats**

*Hans Hagen*

Putting floats next to the text is sort of tricky. There are simply too many border cases to cover. After stepwise improving the code, which of course then broke existing (user) tricks I decided to do a more drastic cleanup, using a bit more of what we can do with Lua. The new approach is mostly compatible but might give different spacing but at least we're more predictable so that we can at some point say "This is it".

### **MFLua 1.0**

*Luigi Scarso*

MFLua 1.0 is the first tagged release, to appear in T<sub>E</sub>XLive 2019. This talk aims to show how can be used to make a simple font delegating Lua to implement the backend.

### **MARCS—An online report card system with CON<sub>T</sub>E<sub>X</sub>T back-end**

*Pavneet Arora*

The very specific needs of a Canadian Study-Abroad high school for a remotely accessible report card system had become acute. Unlike standardized report cards which primarily focus on grades, and stock phrases on a per course level, the requirements were for extensive feedback in the form of teacher comments on a per unit or module basis. Students were thus given the opportunity to use the guidance to improve their work right from the outset and throughout each course. A final, published report card needed to be output. The system had to serve multiple constituencies: students, parents, teachers, teaching assistants, administrative staff, school directors, and school boards with differing granularity of access and control. The work done to develop MARCS, a web based report card system based on the Laravel PHP framework, and with its

ConT<sub>E</sub>Xt back-end for creating print ready report cards will be presented.

### **CONTEXT: in one second**

*Everyone*

On the web you can find these “Learn ‘foo’ in 1 second” tutorials (well, Luigi Scarso did find them). In this group activity we will see how far we can come in one, two, five, ten or more seconds. It can even become a wiki corner.

### **Luapost graphics, or rebuilding the (Hobby) graph package.**

*Alan Braslau*

The lua/metapost interface has been expanded and the implementation of the integrated MPLib has been overhauled, where now only one MP run is necessary rather than two as in the past. This has led to a significant gain in performance whenever an intensive use of MetaPost is included. In the manipulation and graphical presentation of data, lua can be used to greater efficiency, delegating the reading of data and calculations to lua and graphical display to MetaPost. We have begun an experiment in re-implementing John Hobby’s graph package or something similar in a way that can handle “big data”, that is very large data sets. A discussion will be led as to needs and what should be included.

### **Edward Tufte’s Presenting Data and Information**

*Alan Braslau*

I attended Edward Tufte’s class on Presenting Data and Information in Denver on July 30th. Much of the course was devoted to a presentation based on his four books: Envisioning Information, Visual Explanations, The Visual Display of Quantitative Information, and Beautiful Evidence. Tufte’s more recent work on The Future of Data Analysis is captured in a keynote presentation at the Microsoft Machine Learning & Data Science Summit in 2016, a one hour video that we can watch together.

We will also watch a 37 minute film “Teaching to

See” by Inge Druckrey and produced by Edward Tufte on graphic design.

### **Running CONTEXT in a Docker container. Some problems to solve to build a CONTEXT cluster.**

*Massimiliano Farinella*

ConT<sub>E</sub>Xt can be run inside a Docker container with minimal overhead. Container isolation lets you run different versions or configurations of ConT<sub>E</sub>Xt on the same machine without conflicts. But you may want to run different instances of ConT<sub>E</sub>Xt on all the cores of your CPU or all the CPUs of a cluster.

### **Making manual typesetting adjustments in an XHTML to PDF workflow in CONTEXT: some hints.**

*Massimiliano Farinella*

Every automatic typesetting needs some manual adjustments. When your source is XHTML, you also need to code those adjustments with XHTML objects. But they have nothing to do with your structured content. How to prevent them from messing up your markup? How to highlight them in a visual editor?

### **Brainstorming session**

*(proposed by Alan Braslau)*

A session or rather a couple of sessions to discuss general issues, a sort of free-for-all to air new ideas, thus giving prime to all who attend the meeting(s). It would have to be moderated in order not to go everywhere, and should not be a forum for grievances but rather a type of “brainstorming”.

Maybe this could result in a (revision of the) “roadmap”.

I suggest that this could run over several sessions, at least two, in order to allow the participants to think about the discussion before concluding.

In most likelihood, most that will come up is already handled, yet we may not realize or know this or might have forgotten.