OctaveRs

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Please Call it "Octavers"

Not "Octave" + "R" + "s"

The "R" stands for "R" statistical language

Who am I

Who am I?

- Not a programmer (I would like to be!)
- Not a mathematician
- Not a designer
- Automatic control (teaching, research)
- Modeling by ODE: Switched DC-DC converters, TCP, WWTP using activated sludge
- Web design: XHTML, CSS, Javascript, UX

At Universidad de Los Andes

- You can have easily a (hacked) MATLAB
- No budget for PCs since 2004
- Economic/political crisis in Venezuela

My story

- 1990: as student, MATLAB was a central tool
- 2005: MATLAB-based book in Spanish (nonlinear systems)
- 2006: How I can get MATLAB running on the Web? MATLAB Webserver (project ended soon later)

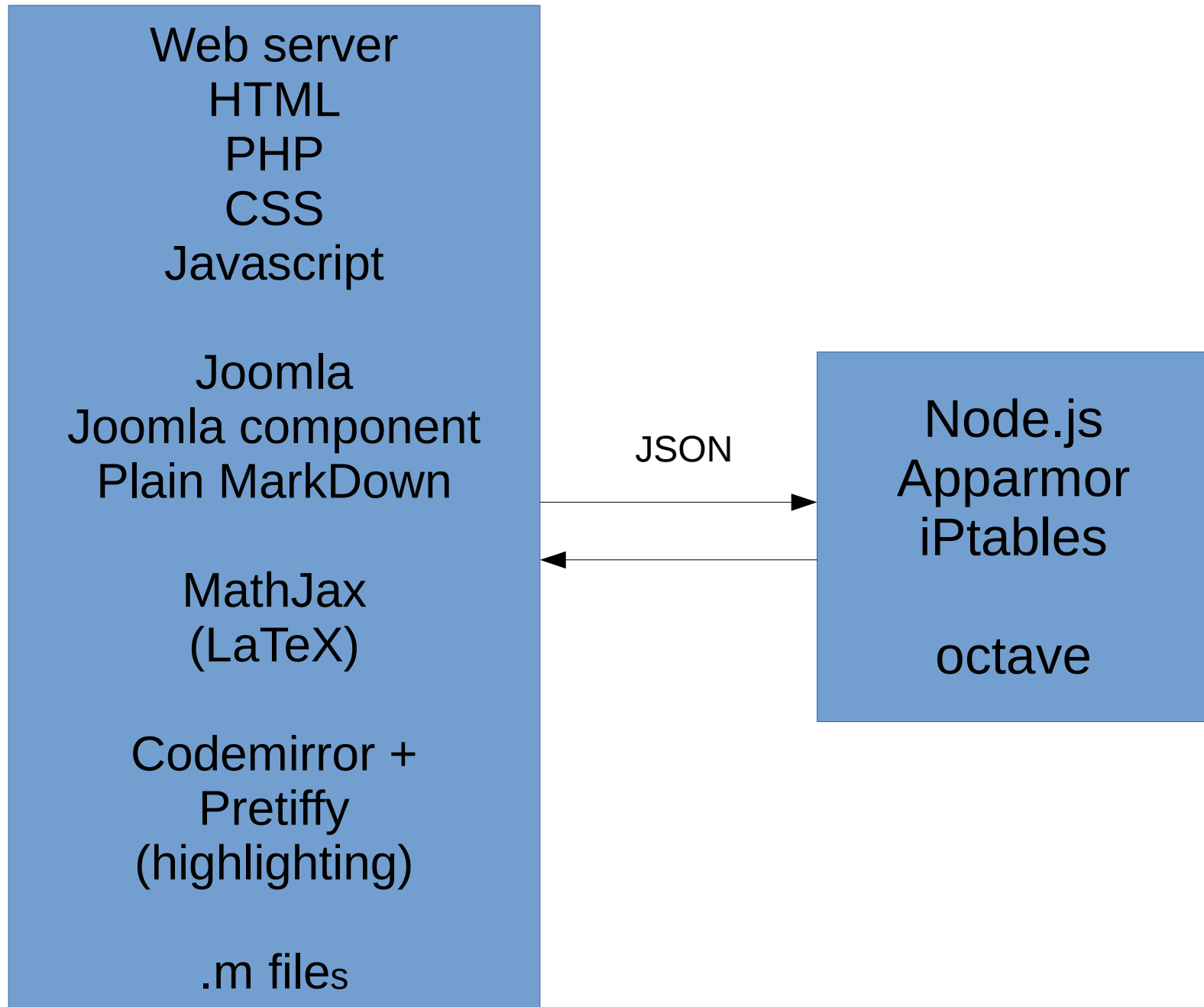- Then: EJS, Scilab, Octave – **GNU Octave** Aha!!!

On the Web

- First of all 2006-2008: plain HTML – server crashed
- Dokuwiki plugin (2011) – working today
- 2012-2013: Joomla (PHP, by system command) + MathJax + Codemirror. Hacked several times, Jordi deleted twice the server at ULA
- 2014: course on Science Gateway in Catania, node.js
- 2015: Linode (cloud infrastructure)

What I need from new Octave developments

CLI

octave -H -q --no-line-editing --no-window-system
script.m >> script.out 2>&1

Web server
HTML
PHP
CSS
Javascript

Joomla
Joomla component
Plain MarkDown

MathJax
(LaTeX)

Codemirror +
Pretiffy
(highlighting)

.m files

JSON

Node.js
Apparmor
iPtables

octave

Inside

- Analytics: I can access every single running by which user, I can see server use

- Permission to add is given after request

- I can block users

- Size: almost 300 users registered, 5 "active" users (using it), more than 250 code snippets

Some Problems (backend)

- Working alone (we are bound to repeat history)
- Bugs (a lot!)

- Personal: I am paying both servers (about 200 $/year)

- Funding: suggestions are welcome!

OctaveRs (frontend)

- Web app based on a cloud infrastructure
- Personal site open to all
- "Easy to use" (user feedback!?)

- A notebook ?? (not quite)

- Let's see what we have been done

Teaching experience

- Better writing (like a Wiki): text + equations + code + links

- Procrastination - Oops

- Lot of examples

What is next

- English! Absolutely!
- Adding interactive graphs (D3, processing.js)

- Enable comments
- Tag organization ??

- Computational narrative??
- Proposal: Books, Academic journal (open access with live code)

A **HUGE** Thank you!

Finally, please:

1) Read the Open Business Model Canvas of OctaveRs
2) Contribute to OctaveRs: *be my guest*.