

Making free science free

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Why?

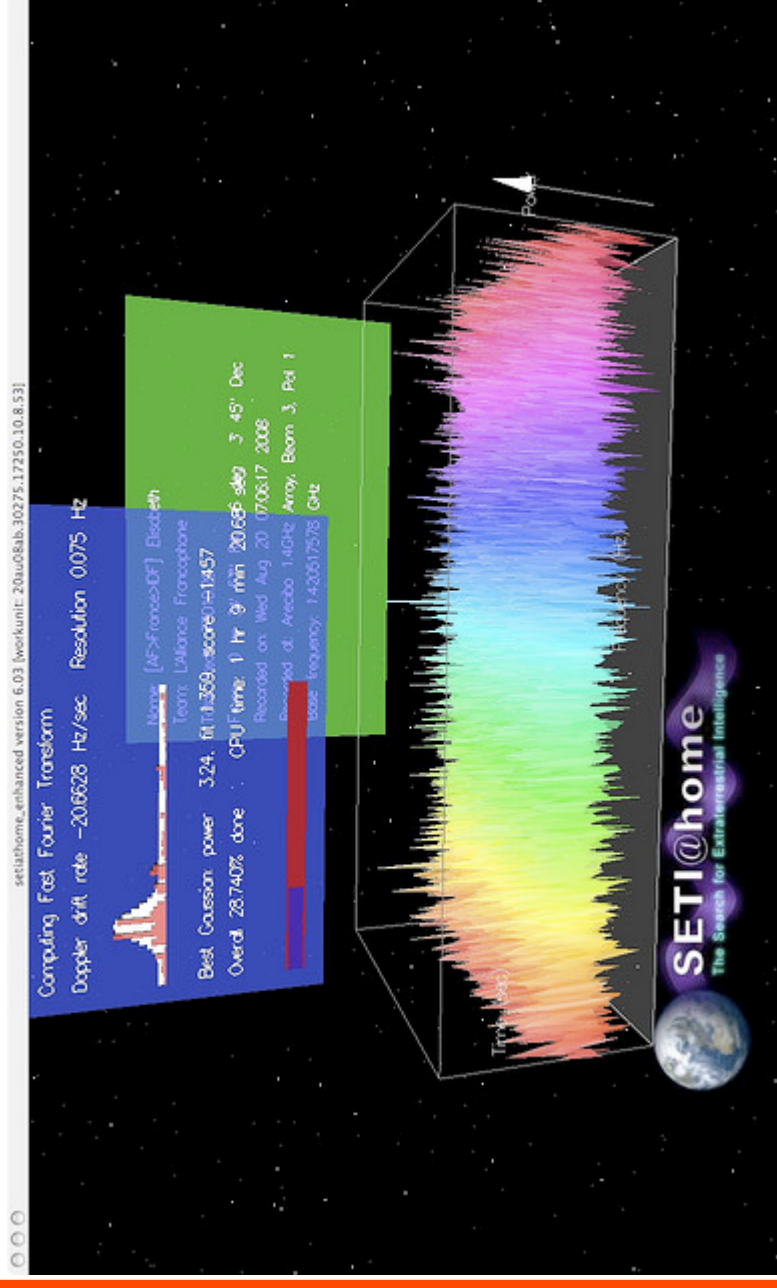


My wishlist

- Low entry threshold
- Massive scalability
- All in one system
- Fault-tolerance (except byzantine failures)

(In)Volunteer computing

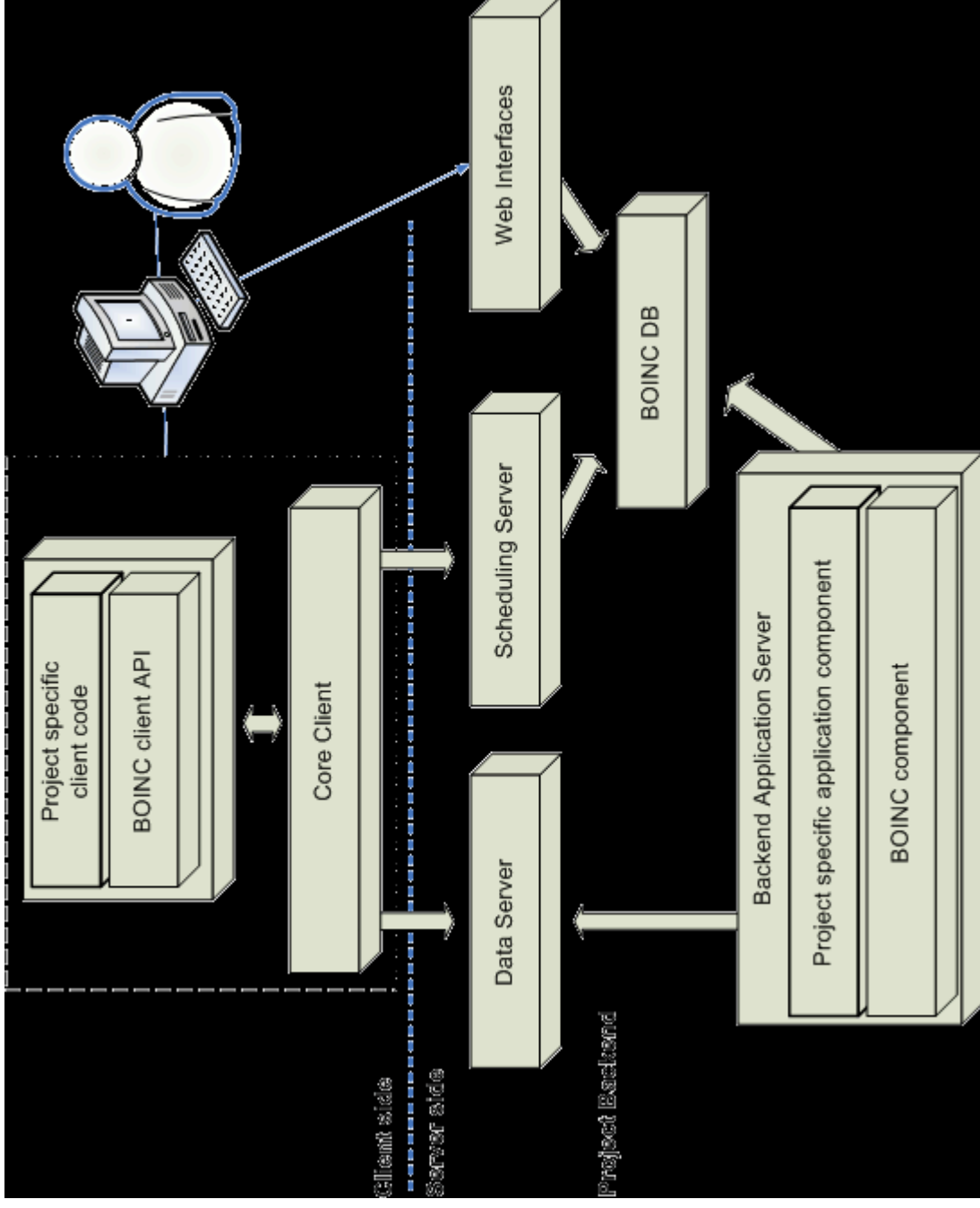
- BOINC as a paradigm.
- Infrastructure based in PHP/MySQL
- Handling 8 million request/day



OK, I buy it. What do I

need?

- Tasks
- Users
- Groups
- Statistics
- GUI



What do you want it for?

- Low cost or free science
- *Citizen science*
- Evolutionary algorithm experiments (or any other, for that matter)
- Web science: *social distributed computers*

That's why

We need an object store

What can we use



Software as a service

FREE

Almost, but not quite

- Usually freemium services (pay after a use level)
- Heroku, OpenShift, Amazon, Google AppSpot...
- There's science in it: optimize the number of requests to the server to avoid charges.

Can do nothing without you

- Eventually, somebody has to lend CPU time to an experiment.
- AJAX provides a perfect environment for doing that.
 - COMET (server-push) too.
- New tech: WebWorkers, apps.



Free as in free speech

- The whole process must be transparent: Open Science
- People won't give you cycles if they don't trust you.
- Release early, release often, release all: data, source, papers...

What have you done?

- Distributed Computing on Rails:
 - Ruby on Rails + AJAX on client = Distributed evolutionary algorithms
 - Experiment with up to 1000 clients
 - AGAJAJ: same thing (pretty much) with `mod_perl`.

EvoSpace

- UGR + UEH + Tijuana tech.
- Redis + Django based distributed evolutionary computation engine
- Embedded wetware: valid for *interactive* evolution
- Now moving to Heroku

Doing free science is great

But it's better if it's just a choice
Looking for partners for EC projects? Contact me
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