

# Agora Virtual e-learning federated by design

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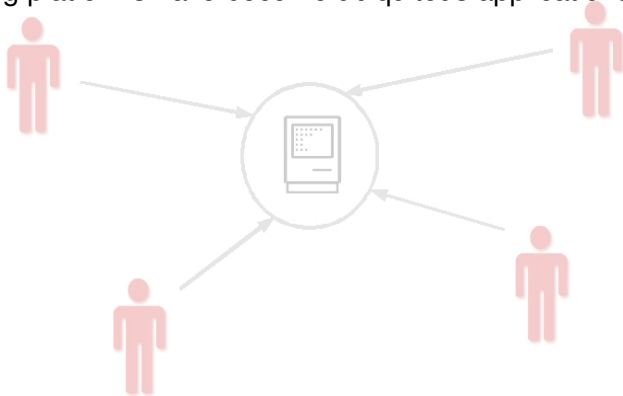
TERENA EuroCAMP  
Dubrovnik  
November 15th 2007



# Why a federated model for e-learning?

The failure of the monolithic application

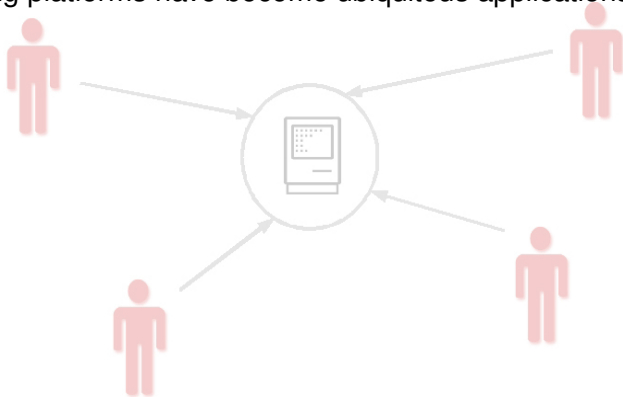
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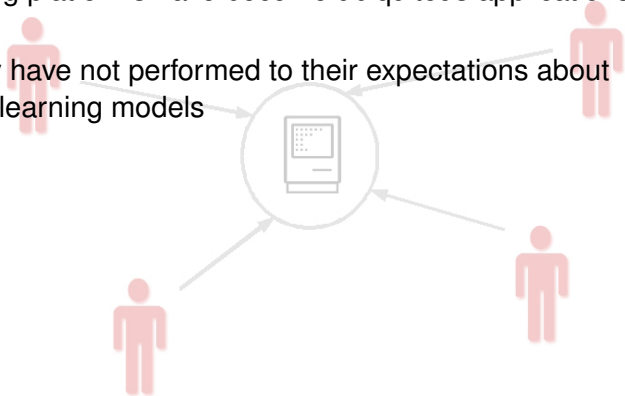


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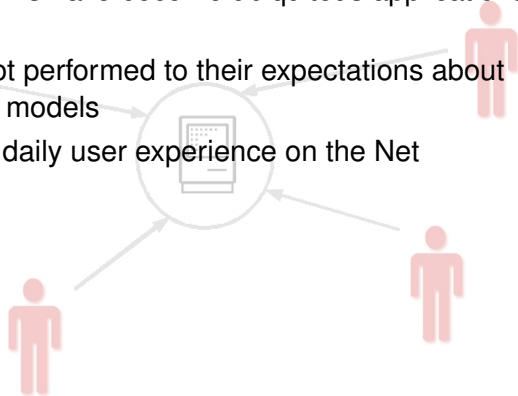


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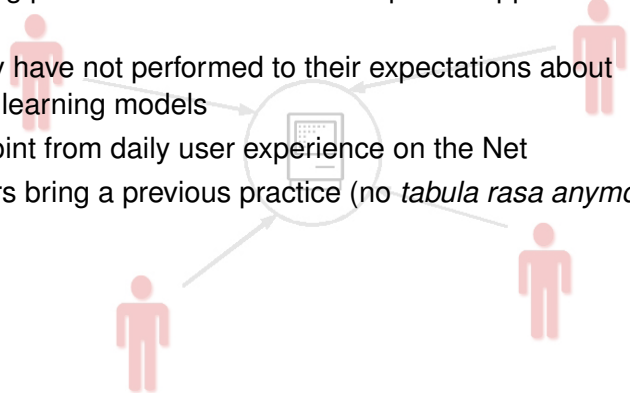
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  - Disjoint from daily user experience on the Net
  - Users bring a previous practice (no *tabula rasa anymore*)
  - Does it make sense to speak of "constructivist" platforms?
- 

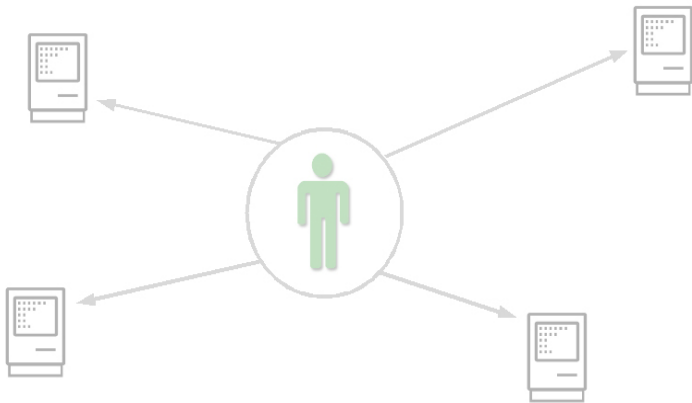




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New uses of *The Net* require new concepts for the platforms

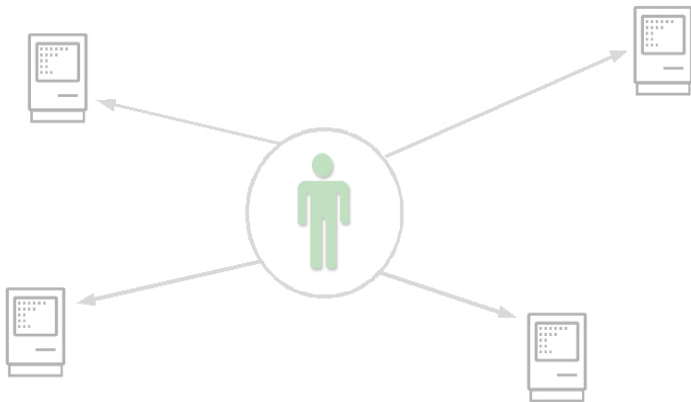


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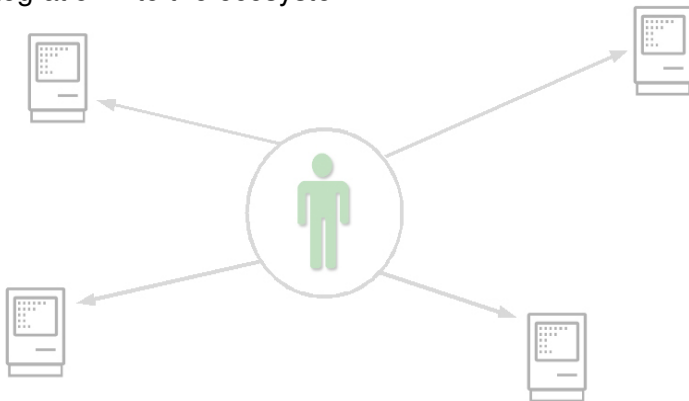


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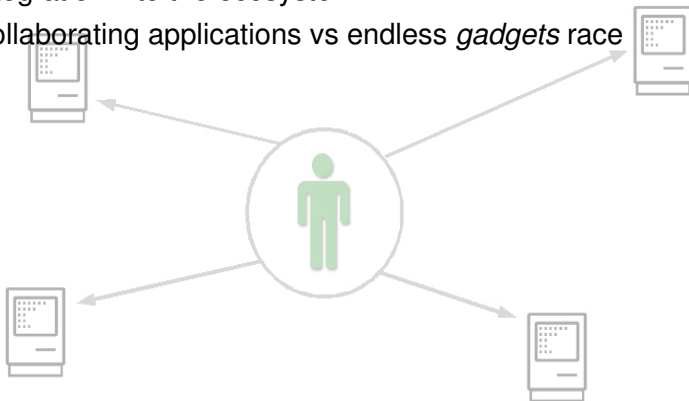


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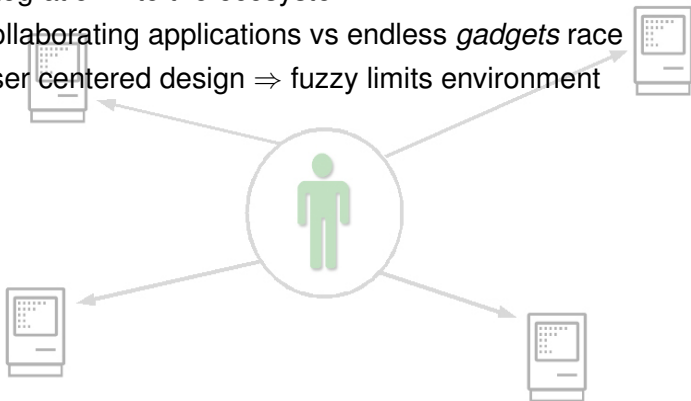


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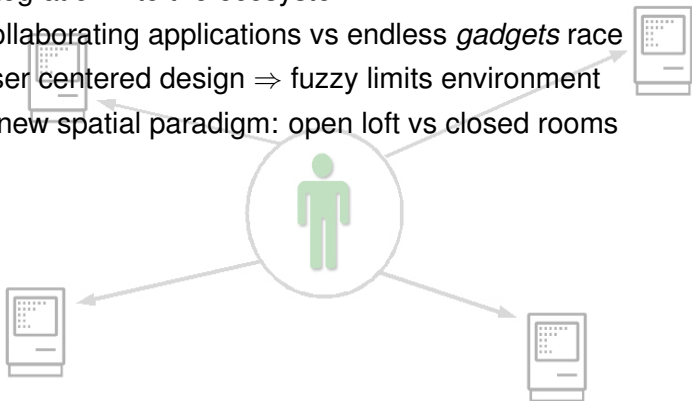


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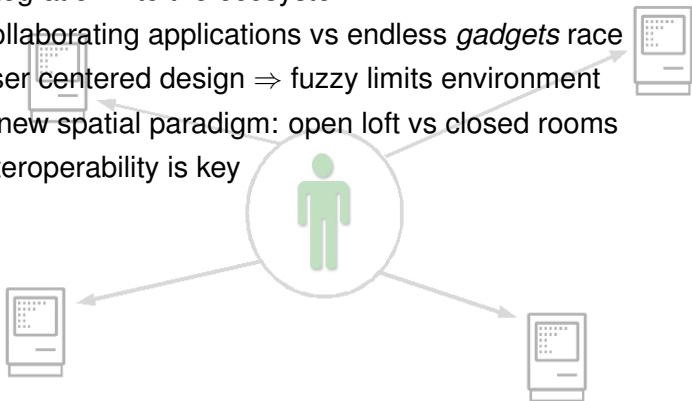


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- Interoperability is key

*Interoperability is the degree to which a provider and a consumer can successfully interface having never met*

Coppeto, T.: Introduction To OSID V3 for developers





# Materials for building a new platform

Available technologies for collaborating applications

We need some basic tools to transform the flat into a loft



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- Platform

## Agora Virtual 1.0 → 5.0

- Test bed for new approaches
- Two years in use for postgraduate courses and international research projects
- Some degree of interoperability since v1: Jabber server, authN OSID, Google Maps API...
- ...but other tools remain in traditional form



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- Platform
- **Interoperability**

## OKI OSIDs

(Open Knowledge Initiative Open Service Interface Definitions)

- Specifications describing communications between components of a software environment
- Service oriented architecture
- Interoperability as main goal (even better in v3)



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- Platform
- **Interoperability**

## Harmoni framework

- Led by the Curricular Technologies Group at Middlebury College
- PHP implementation of OSID v2 (v3 is on its way)
- Rapid development and easy maintenance of curricular IT projects



# Materials for building a new platform

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We need some basic tools to transform the flat into a loft

- Platform
- Interoperability
- **Identity**

## phpPoA → PAPI

- Easy to deploy
- PHP support
- Widely used in our context

The simplest and easiest way to put SSO into PHP applications



# Materials for building a new platform

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## SimpleSAMLphp

SAML ⇒ federations  
simple ⇒ easy to integrate  
php ⇒ *our* language

In all:

a clever SAML 2 SP and IdP implementation

or

the simplest and easiest way to get

PHP applications into SAML 2 federations



# Evolving the platform

Starting point: Agora virtual v4

Ágora Virtual .es

Manuel Cebrían (mcebrían) worksites: Supervisión practicum Manuel Cebrían 07 [Logout]

- Home
- Schedule
- Announcements
- Resources
- Dropbox
- Assignments
- Forum
- Rubric
- Users

## Rubric

Back



### The Context observation - Jurado Ripoll, Laura

Criteria	Indicators				Value
<i>The context observation</i>					
The context observation	It don't gather any characteristics	It gathers with details the characteristics of the students group	It gathers with details the characteristics of the students group, of the school and of classroom	It gathers with details the characteristics of the students group, of the school and of classroom, and the socio-economics levels of context	10
	2.5 ↻	5 ↻	7.5 ↻	10 ↻	
<i>Observación contexto escolar</i>					
Makes the objectives in terms of competences	It does not do it in terms of competences	Single some	Considering Makes all the objectives in terms of competences	Considering the characteristics of the studentand their resources available	25
0 ↻	8.33 ↻	16.67 ↻	25 ↻		
<i>Categoría unidad didáctica</i>					
Justifies the assignment	It does not make any justification	Yes, but briefly	It justifies with the PCC	It justifies with the PCC and curricula	10
2.5 ↻	5 ↻	7.5 ↻	10 ↻		
Total					31.67 / 45

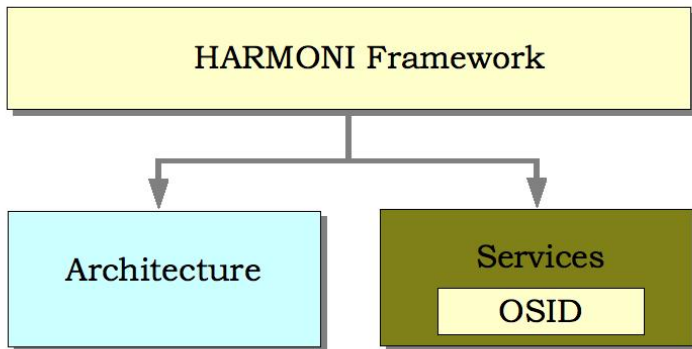
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# Evolving the platform

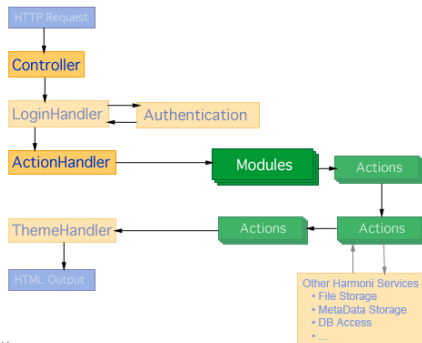
The Harmoni framework





# Evolving the platform

## The Harmoni architecture



### Key

**Orange boxes** = indicate parts of the Harmoni Project (faded boxes indicate optional modules)

**Green boxes** = program-specific code, the code **you** write

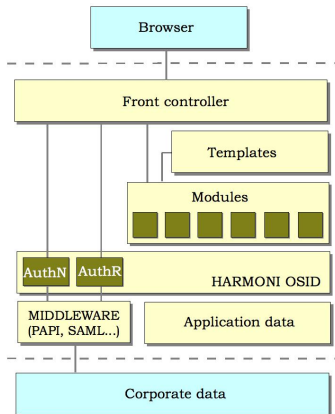
————> = program execution flow

————> = HTTP data flow



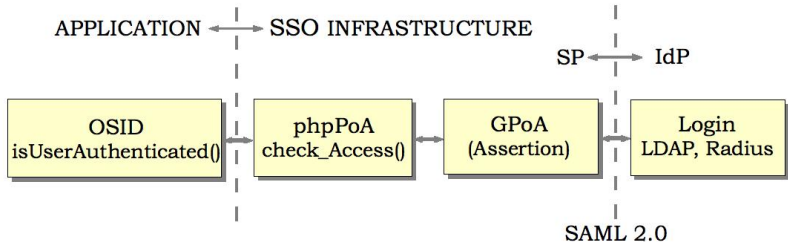
# Evolving the platform

End point: Agora virtual v5 redesigned architecture



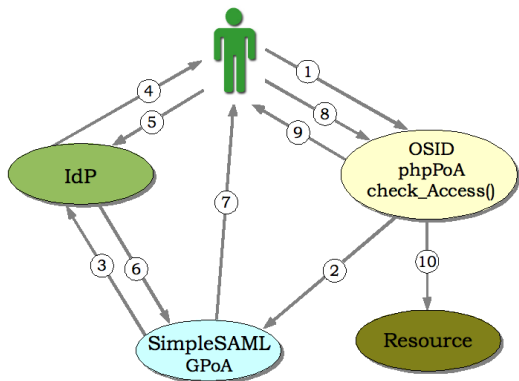
# Evolving the platform

The new AuthN architecture



# Evolving the platform

## The new AuthN process



# Evolving the platform

Thinking out of the box

Our implementation is different from a standard SimpleSAML setup in that



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- One SimpleSAML GPoA is able to manage several applications



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Our implementation is different from a standard SimpleSAML setup in that

- One SimpleSAML GPOA is able to manage several applications
- There is no need for having distinct SPs for each application



# Possible uses

Choosing the best approach for each case

An institution could opt for . . .





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- Get an alternate GPoA for other authentication mechanism (e.g.: basic auth)
- Use this model against a SimpleSAML IdP just choosing the adequate plugin
- Even writing a PAPI plugin for SimpleSAML authentication against PAPI



- Real constructivism has a strong need for new building blocks



# Summary

- Real constructivism has a strong need for new building blocks
- User centered implies being identity centered



- Real constructivism has a strong need for new building blocks
- User centered implies being identity centered
- Applications need to collaborate themselves in order to help the user





# Acknowledgements

Diego López <diego.lopez@rediris.es>

Adam Franco <afranco@middlebury.edu>

Andreas Å.Solberg <andreas.solberg@uninett.no>



Application : <http://agoravirtual.es/>  
Harmoni framework : <http://harmoni.sourceforge.net/>  
O.K.I. : <http://www.okiproject.org/>  
Technical knowledge : [accino@uma.es](mailto:accino@uma.es)  
Domain knowledge : [mcebrian@uma.es](mailto:mcebrian@uma.es)  
*“Marketing”* : [victoriano@uma.es](mailto:victoriano@uma.es)

