
MASHUPS: BUILDING MULTIMEDIA DOCUMENTS ON THE WEB

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AGENDA

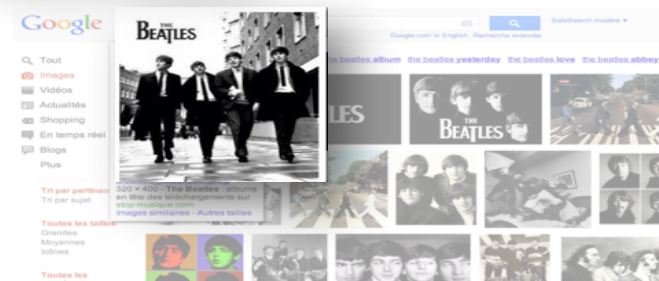
- Mashing up Web data
 - Key concepts
 - Problem statement and objective
- SUNO: a mashup definition environment
 - Principle: mashing up data in space
 - General architecture and main functions
 - Implementation issues
- Conclusions and perspectives

SCENARIO

- Data integration in the Web
 - Aggregation
 - Combination
 - Visualization

Juan Luis Guerra pays homage to Beatles
London - Legendary Dominican singer-songwriter Juan Luis Guerra, famous across the Spanish-speaking world for his merengue and bachata hits, said that his first musical influences had included the Beatles. The 54-year old singer, who gave his first concert ...

Beatles' Sgt Pepper's Lonely Hearts Club Band voted best album cover
The Beatles' Sgt Pepper's Lonely Hearts Club Band, which features the Fab Four in a park, has made its way to the top spot in a new poll of best album covers. The colourful artwork on the 1967 classic, surrounded by cut-outs of icons and celebrities, saw ...



MASHUP

- Mashlet
 - **Atomic** and **reusable** container that calls a **data-provider** and
 - **Presents** the retrieved data (e.g. a Web page)
 - Data Provider
 - Web scrapping
 - Feeds
 - Web services
- Mashup

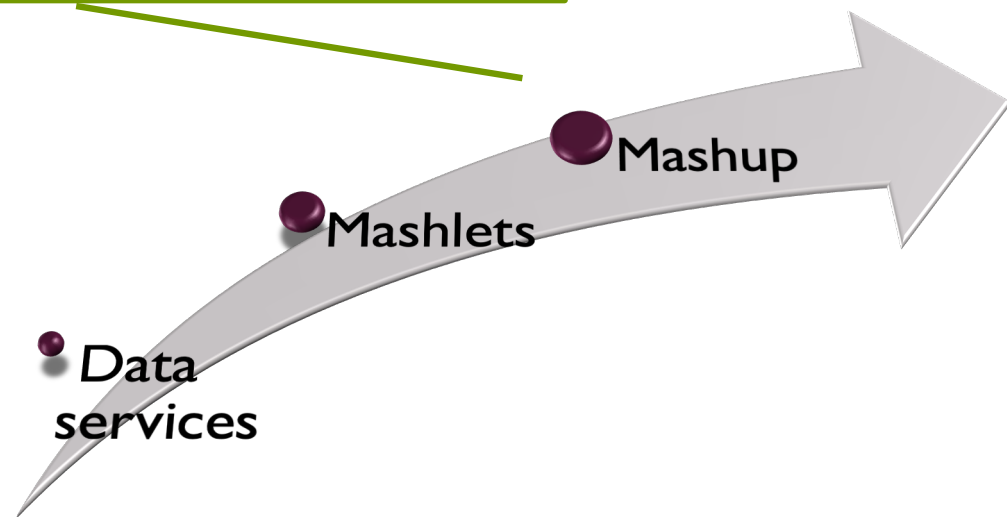
MASHUP

- Mashlet
- Mashup
 - Application that **aggregate, integrate, manage** and **display** data, which are retrieved from several data-providers
 - Examples
 - Yahoo! Pipes (Data Flow)
 - MS Montage (Spatial data organization)

MASHING UP DATA

- Mashlet
 - Graphical: widget
 - Functional: web services
- Mashup
 - Composition of mashlets
 - Loosely coupled data integration

- Databases
- Web services
- Web Pages
- Local Files

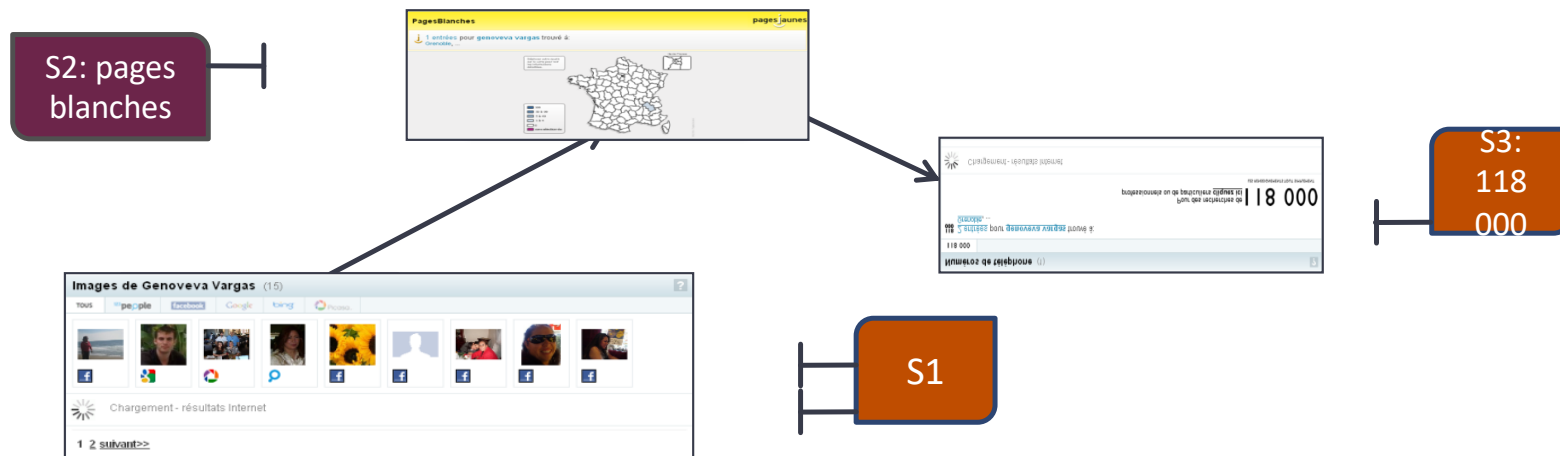


EXISTING WORKS

CRITERION	WSO2 MASHUP SERVER	YAHOO! PIPES	INTEL MASHMAKER	PRESTO
Type	Platform	Platform	Platform	Language/Platform
Implementation	JavaScript	Drag-And-Drop	Drag-And-Drop	D&D XML/ support for adding scripts
Edition tool	Navigator	Navigator	Navigator	Eclipse/ Navigator
Dashbord	WSO2 gadget server	Yes	Yes	Yes
Catalogue	No	Yes	Yes	No

APPROACH

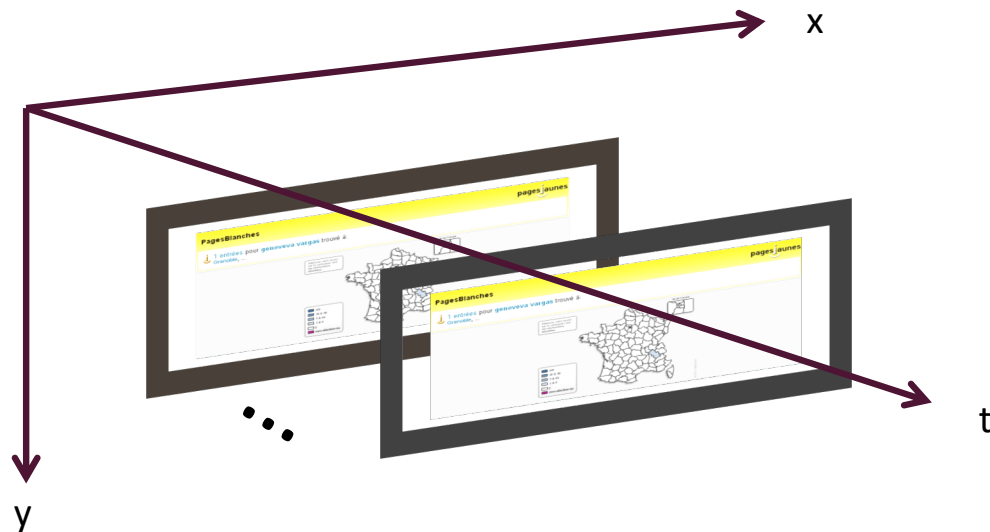
Digital profile of Geneveva Vargas : address, google, bing, flicker, facebook ...



- **Mashlet**: basic unit for retrieving data from a data service (service call) and visualizing results
 - Data service identified by an URI and exports an API with methods for retrieving data
 - Visualization defines a way how to display data in a 2D space (html page) and in time
- **Mashup**: a set of mashlets associated by spatial and temporal relationships

MASHLET

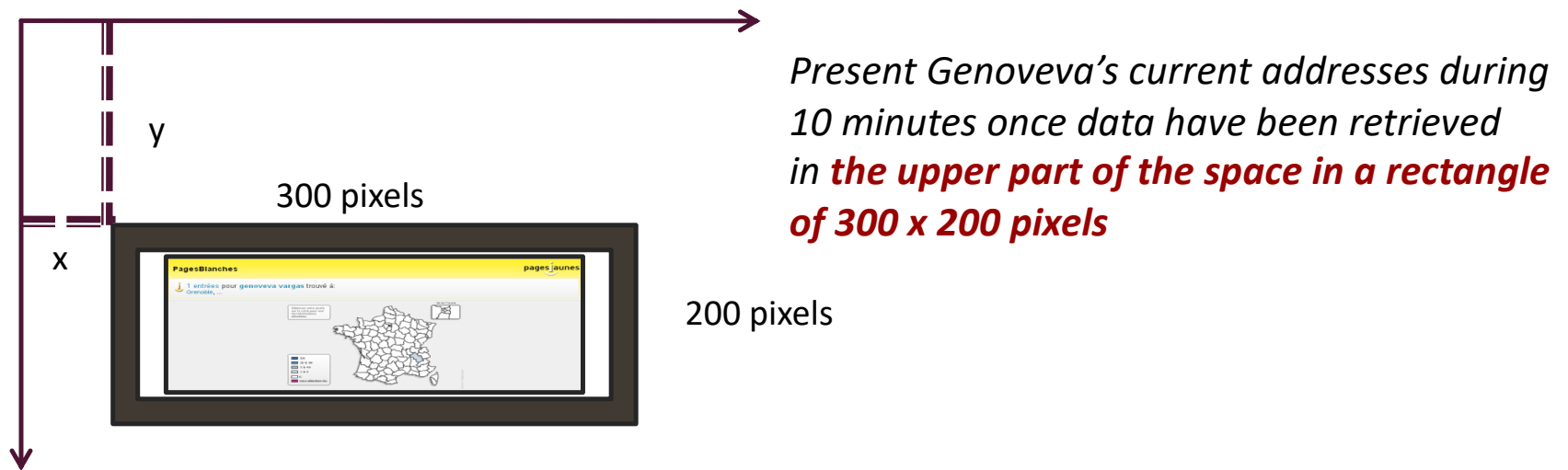
Digital profile of Genoveva Vargas : address, google, bing, flicker, facebook ...



- Visualization: associates a size, a position, a start time, and a duration to the data retrieved from a service
- Management: frequency in which data have to be retrieved by calling the service

MASHLET

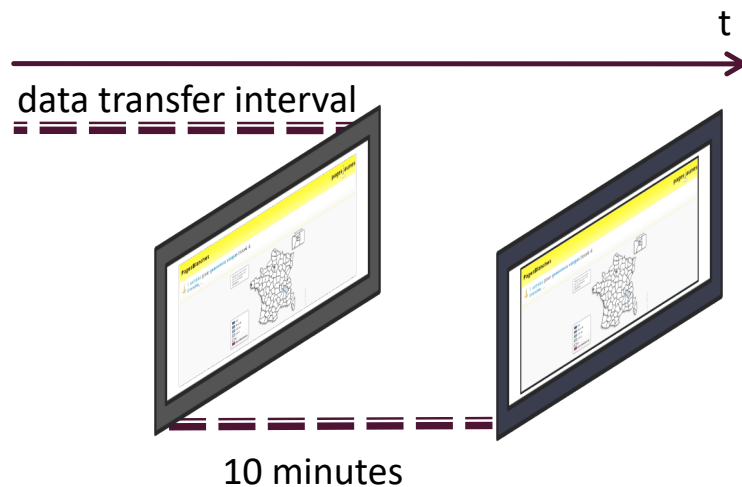
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- Visualization: associates **a size, a position**, a start time, and a duration to the data retrieved from a service
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MASHLET

Digital profile of Genoveva Vargas : address, google, bing, flicker, facebook ...



*Present Genoveva's current addresses **during 10 minutes once data have been retrieved** in the upper part of the space In a rectangle of 300 x 200 pixels*

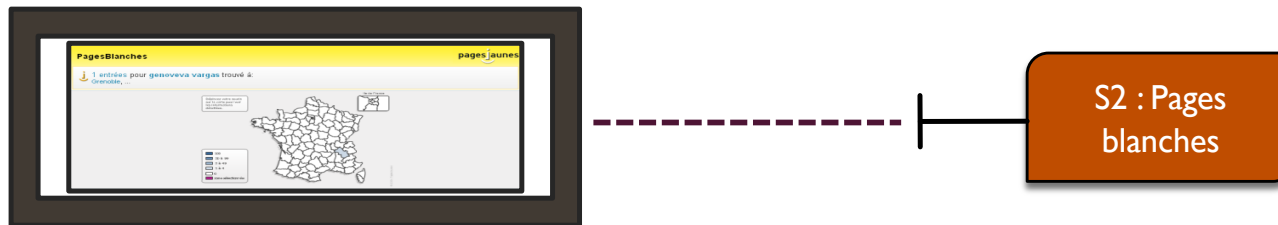
- Visualization: associates a size, a position, **a start time, and a duration** to the data retrieved from a service
- Management: frequency in which data have to be retrieved by calling the service

MASHLET

Digital profile of Geneveva Vargas : address, google, bing, flicker, facebook ...

But Geneveva moves a lot and changes addresses frequently ...

... so data have to be refreshed



Get Geneveva's address every week

- Visualization: associates a size, a position, a start time, and a duration to the data retrieved from a service
- Management: **frequency in which data have to be retrieved by calling the service**

MASHUP

Digital profile of Geneveva Vargas : address, google, bing, flicker, facebook ...

The screenshot displays a web browser window with a mashup interface. The browser's address bar shows <http://www.softonic.fr/>. The main content area is divided into several sections:

- Images de Geneveva Vargas (15):** A grid of image thumbnails with social media icons (Facebook, Google, Bing, Photos) below them.
- PagesBlanches:** A section with a yellow header. It displays "1 entrées pour geneveva vargas trouvé à: Grenoble, ..." and a map of France with a location marker.
- Numéros de téléphone (1):** A section with a blue header. It shows "118 000" and "2 entrées pour geneveva vargas trouvé à: Grenoble, ...".

At the bottom right of the main content area, there is a large "118 000" logo with the text "LES RENSEIGNEMENTS TOUT SIMPLEMENT" and a link "cliquez ici" for professional or private searches.

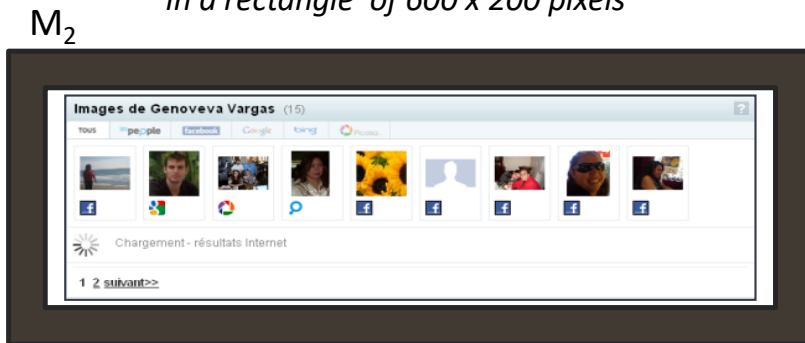
Inspired in <http://www.123people.fr>

MASHUP ELEMENTS

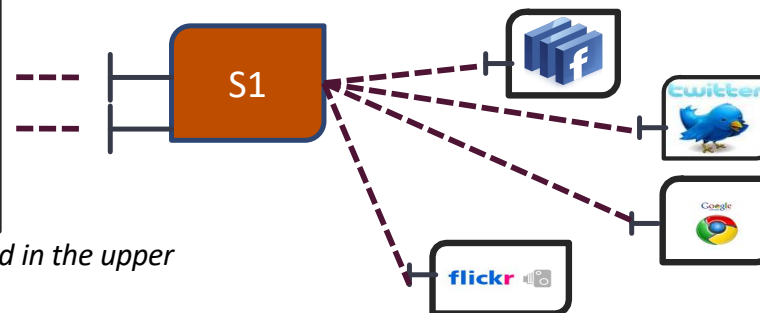


Present Geneveva's current addresses during 10 minutes once data have been retrieved in the upper part of the space In a rectangle of 300 x 200 pixels

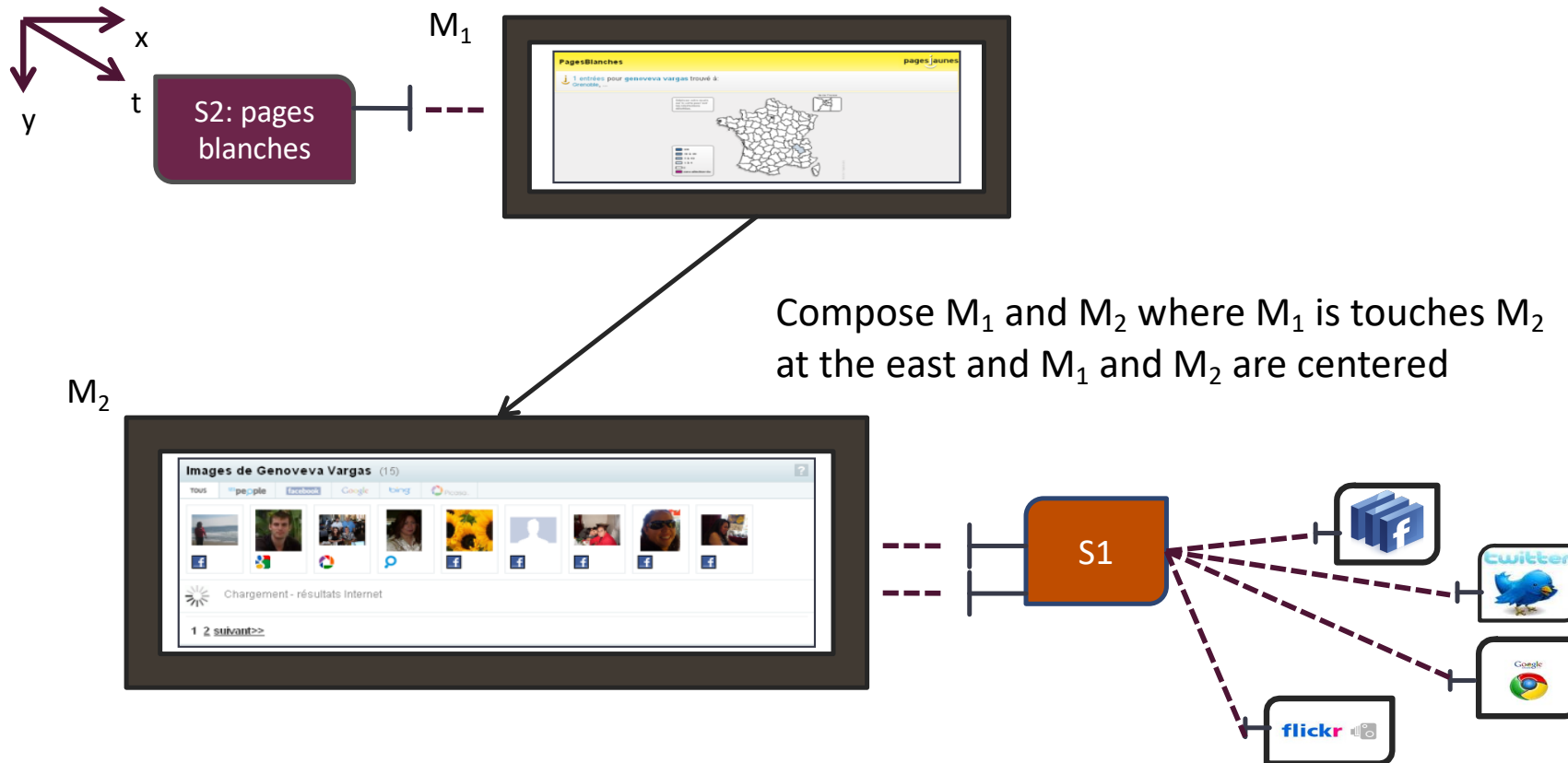
Present Geneveva's telephone numbers during 10 minutes once data have been retrieved in the upper part of the space in a rectangle of 600 x 200 pixels



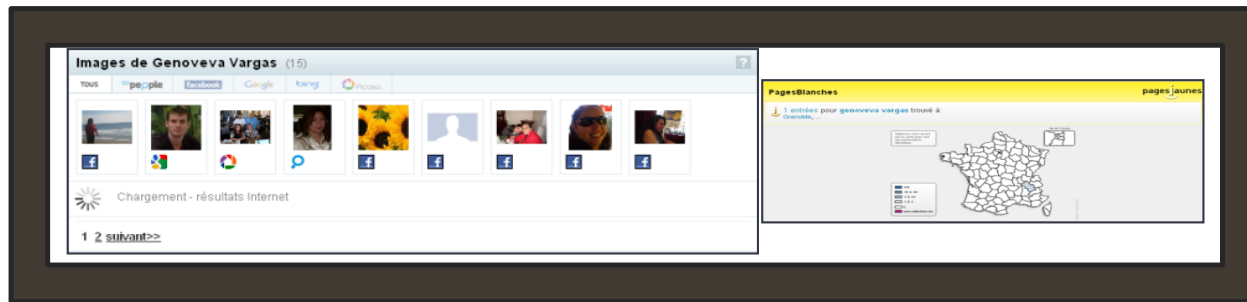
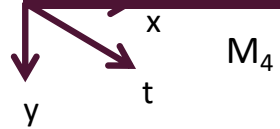
Present Geneveva's photos as long as data have been retrieved in the upper part of the space in a rectangle of 600 x 150 pixels



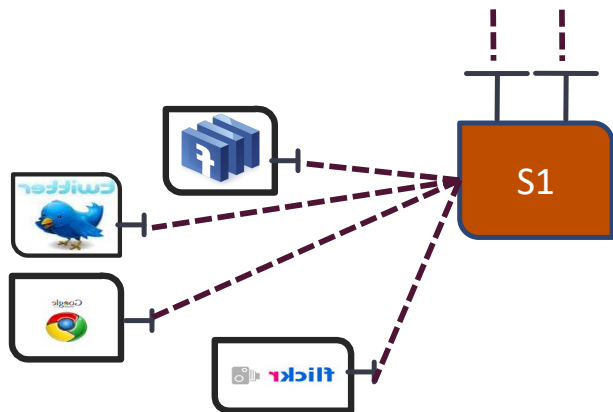
MASHUP



MASHUP

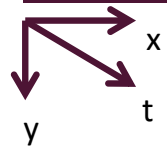


S2: pages blanches

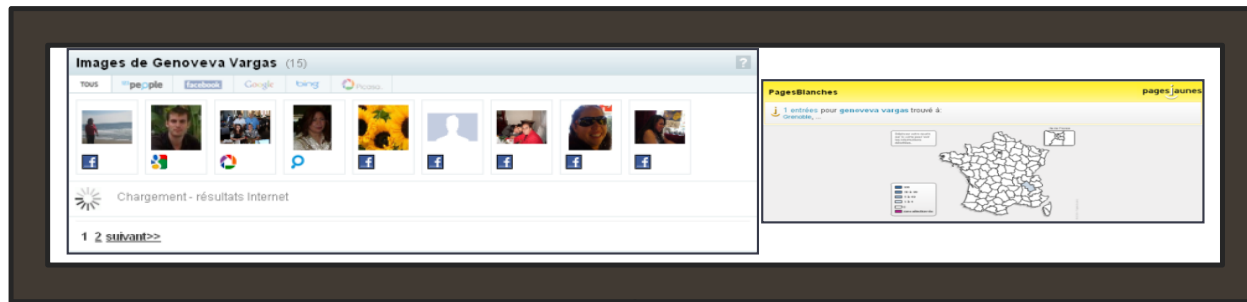


Compose M_1 and M_2 where M_1 touches M_2 at the east and M_1 and M_2 are centered

MASHUP

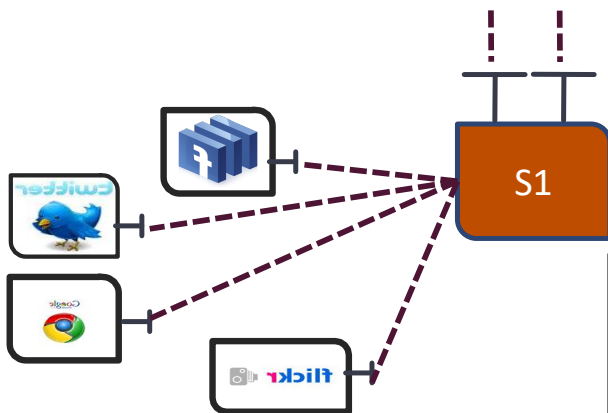


M₄

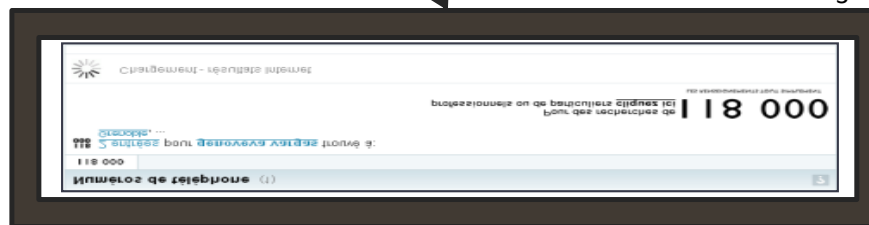


S2: pages blanches

Compose M₄ and M₃ where M₃ touches M₄ at the south and M₄ and M₃ are centred

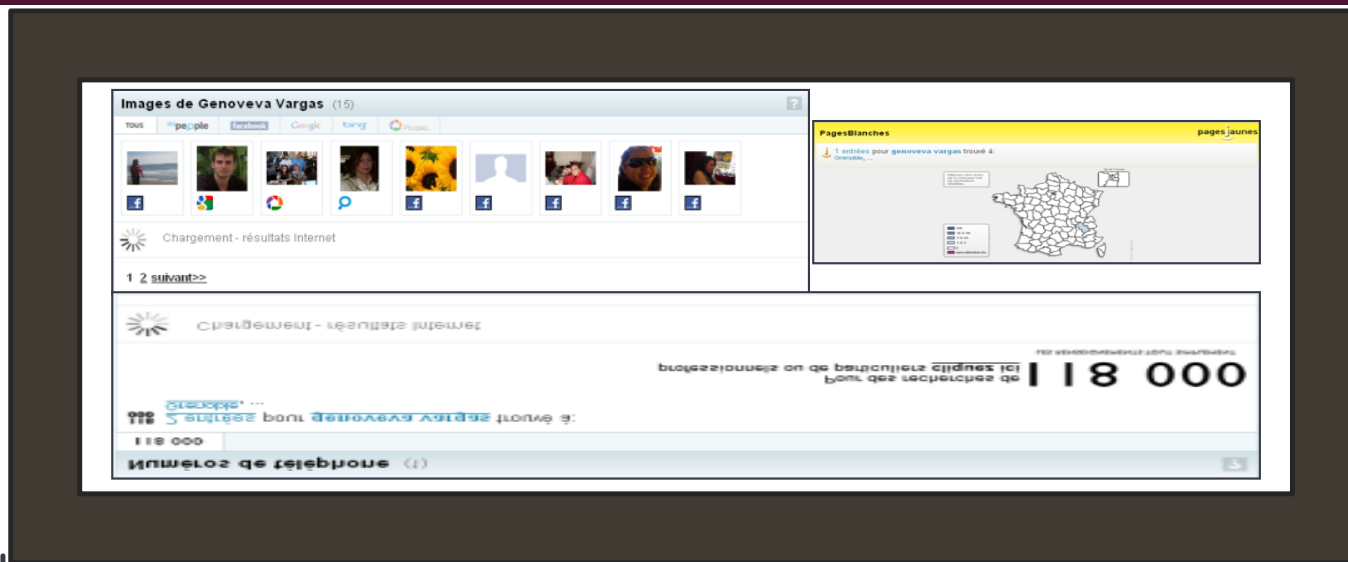
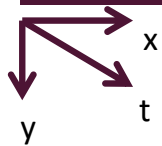


M₃



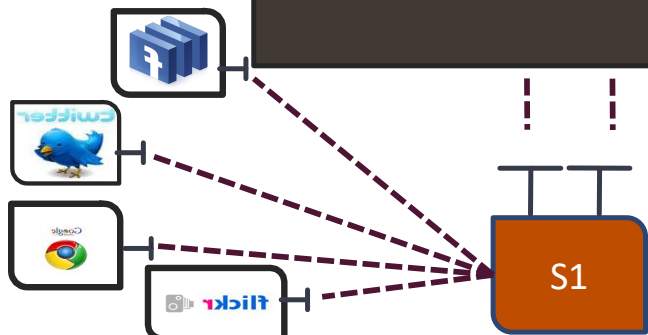
S3:
118
000

MASHUP



S2: pages blanches

S3:
118
000



Compose M_4 and M_3 where M_3 touches M_4 at the south and M_4 and M_3 are centred

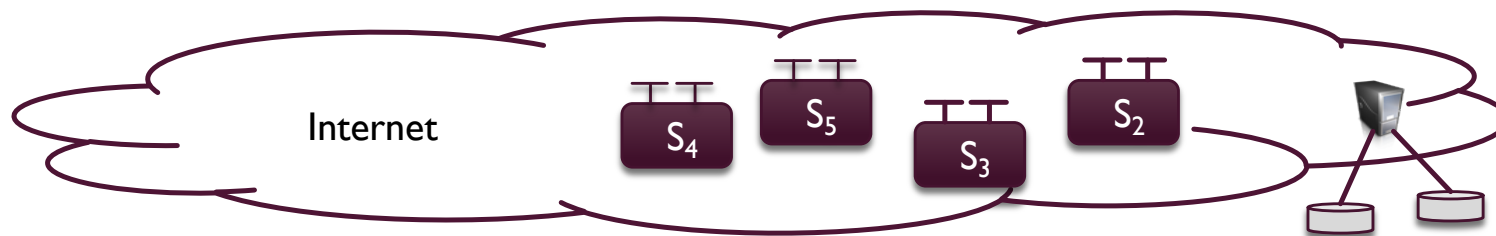
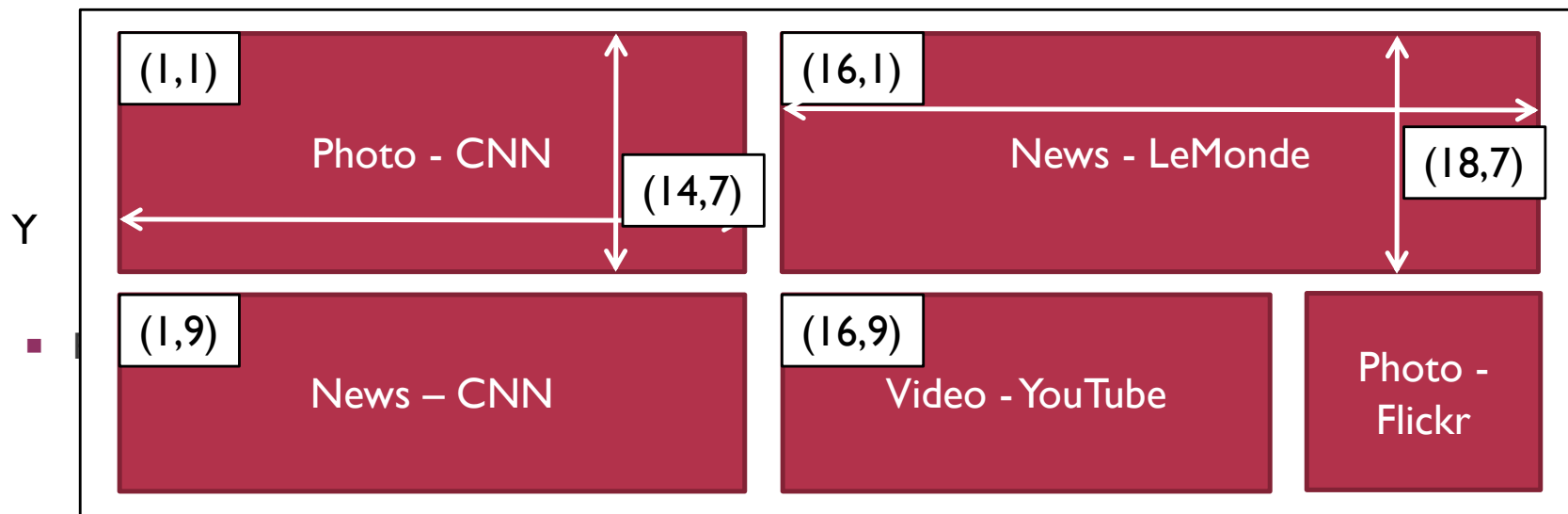


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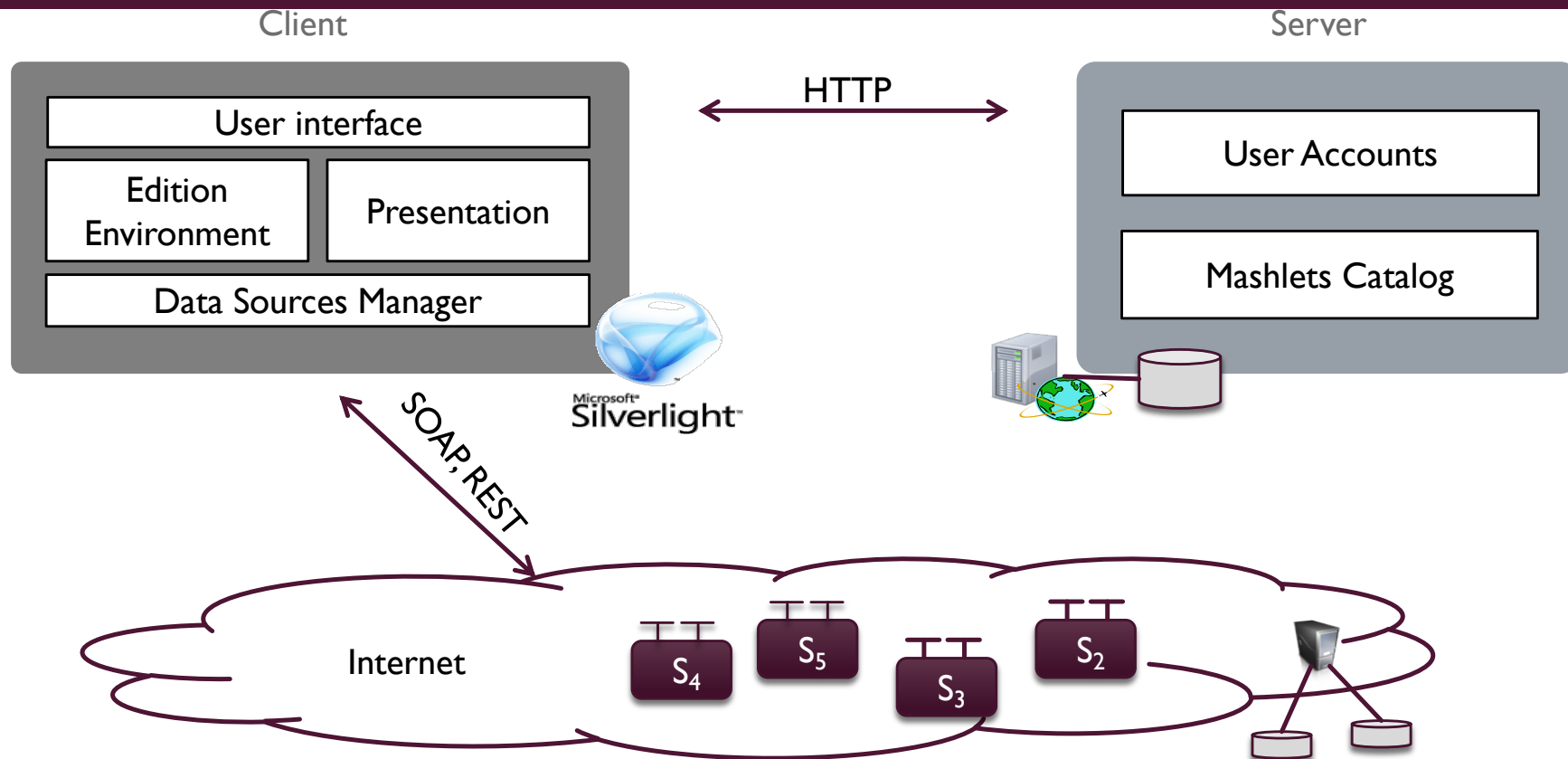
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MASHING UP DATA IN A 2D SPACE PRINCIPLE



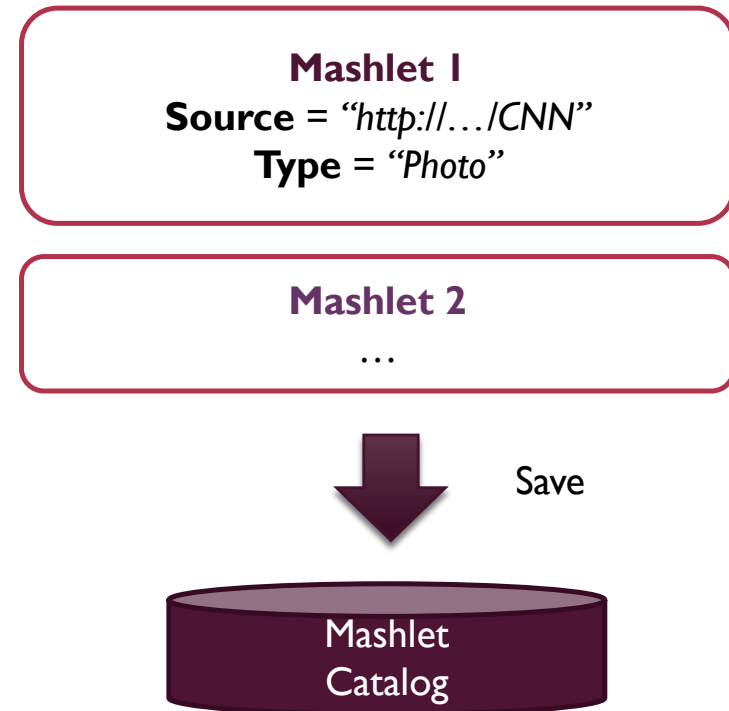
SUNO ARCHITECTURE



SUNO FUNCTIONS

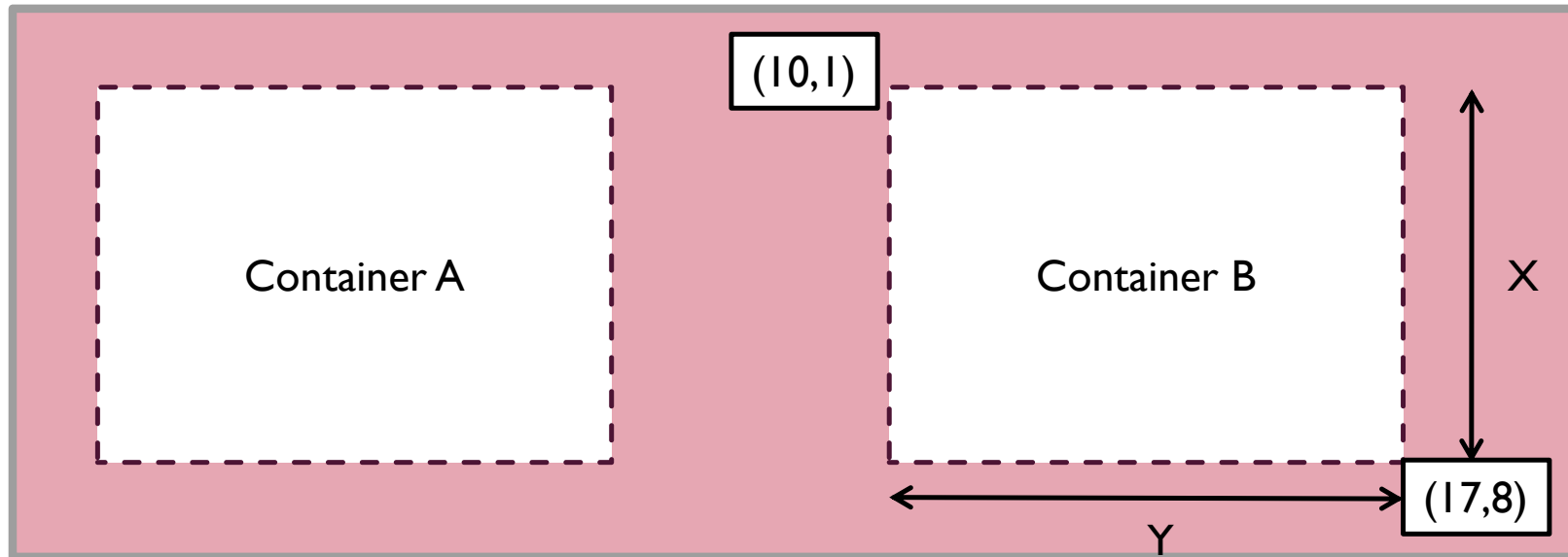
MASHLET DEFINITION

- Procedure
 - **Step 1** Specify the sources
 - **Step 2** Specify the data format
 - **Step 3** Save the mashlet



SUNO FUNCTIONS

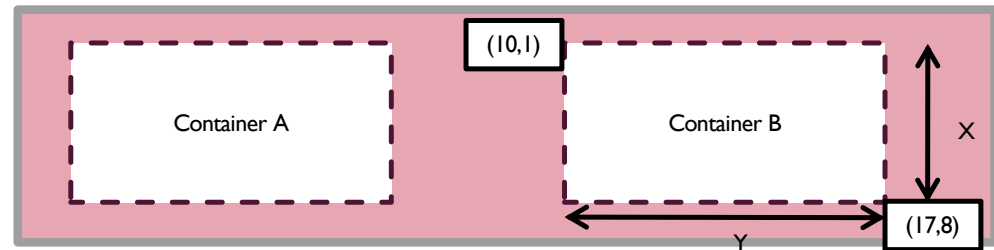
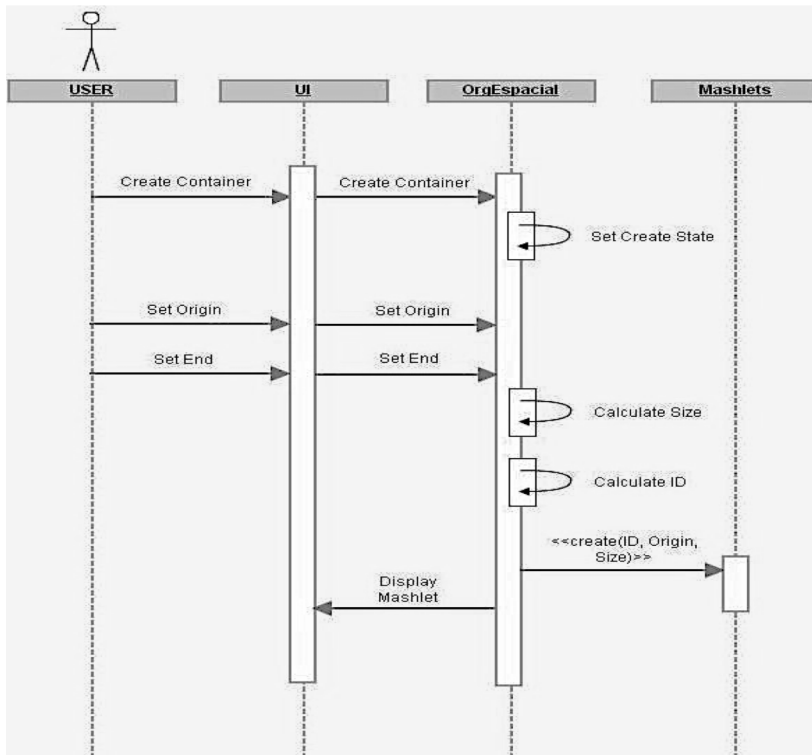
MASHUP 2D SPACE ORGANIZATION (I)



“My First Mashup”

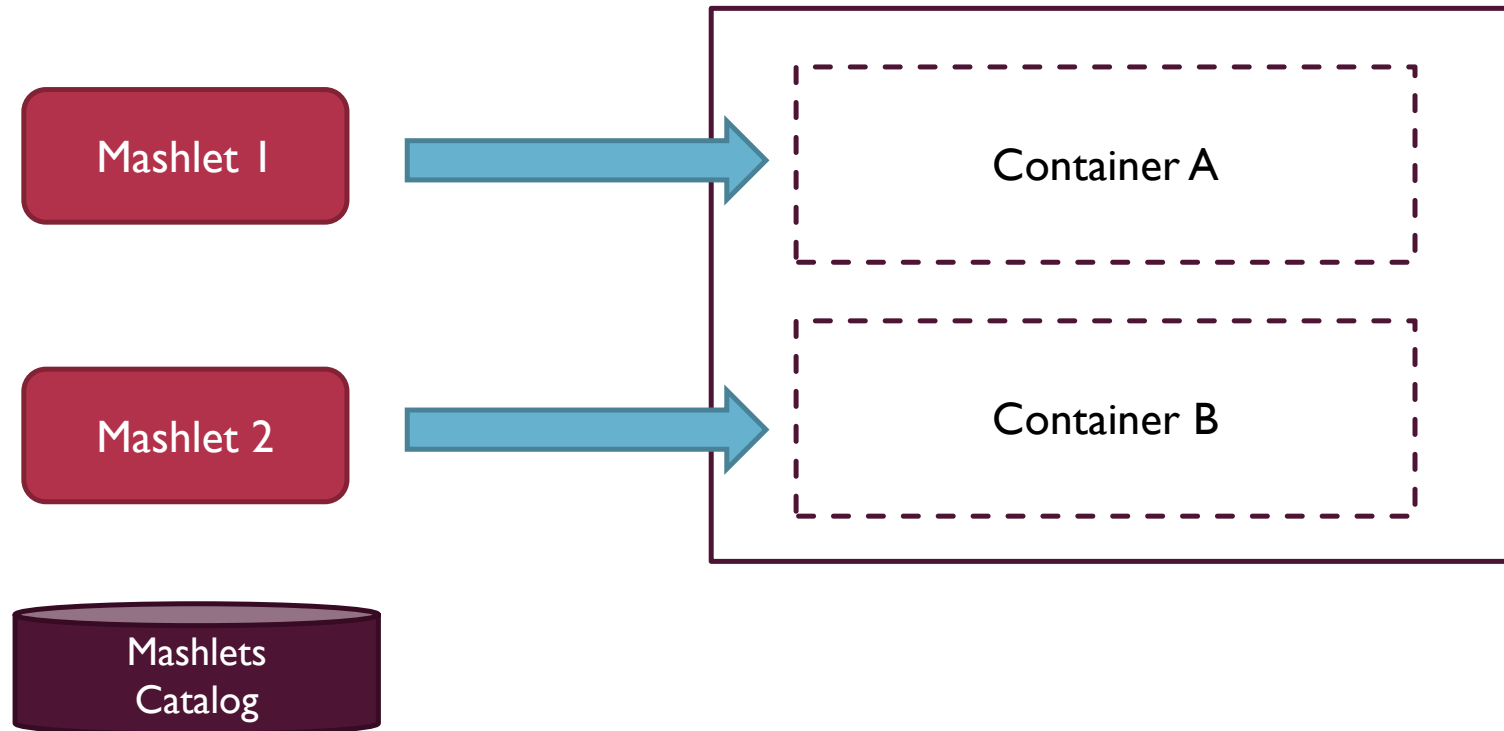
SUNO FUNCTIONS

MASHUP 2D SPACE ORGANIZATION (II)



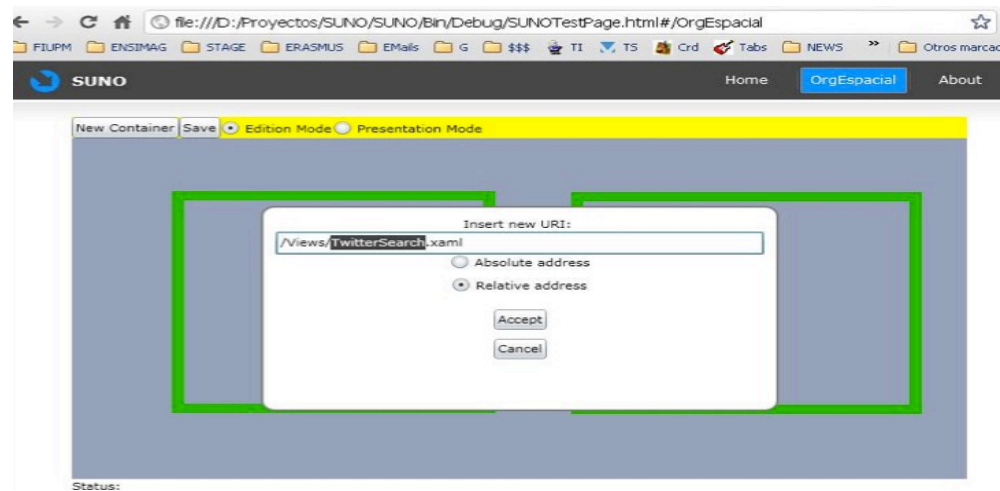
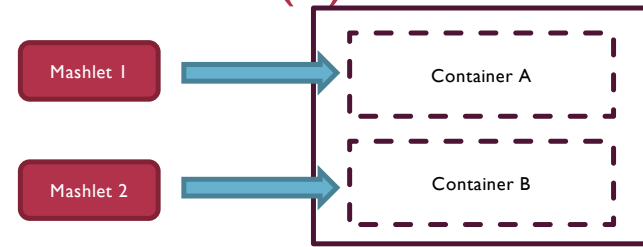
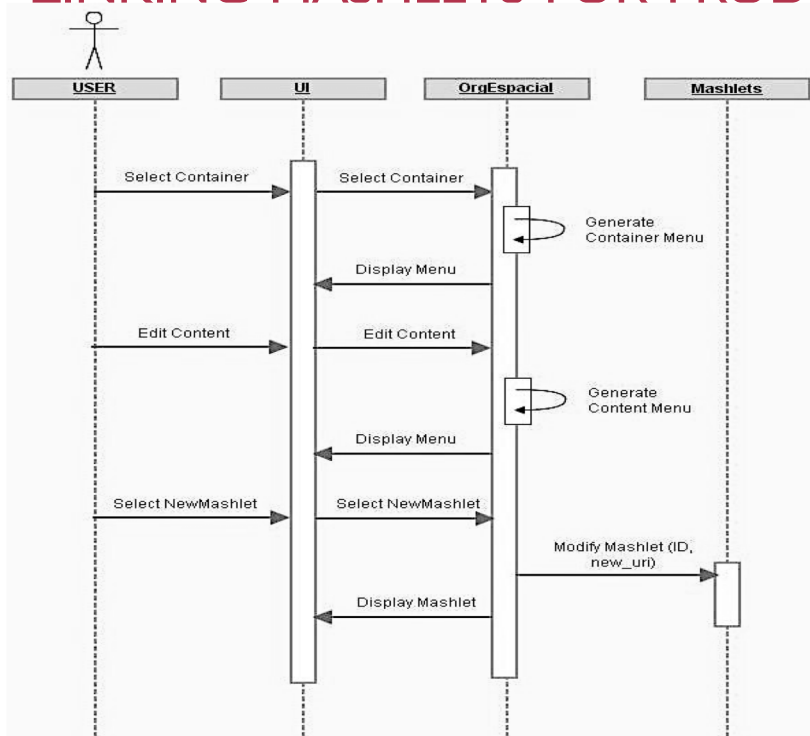
SUNO FUNCTIONS

LINKING MASHLETS FOR PRODUCING A MASHUP (I)



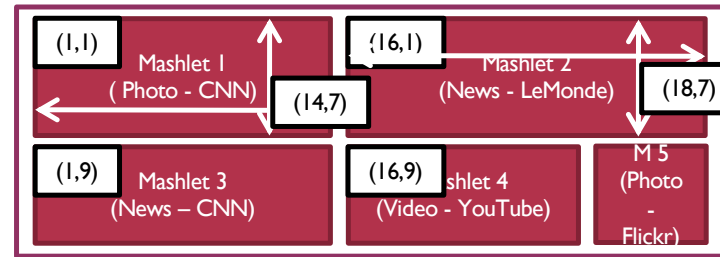
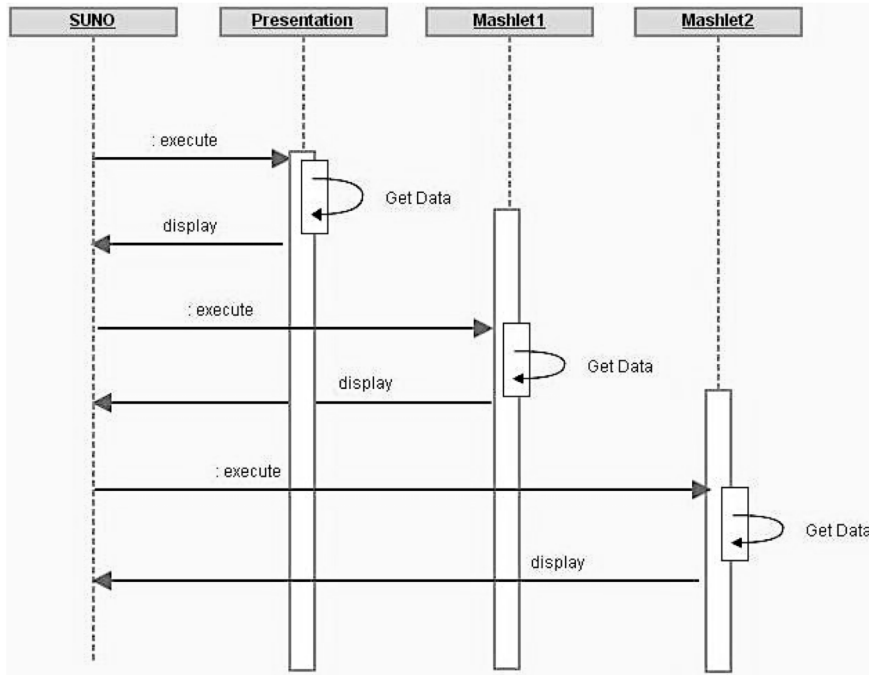
SUNO FUNCTIONS

LINKING MASHLETS FOR PRODUCING A MASHUP (II)



SUNO FUNCTIONS

MASHUP EXECUTION



IMPLEMENTATION ISSUES

- Development platform
 - .NET 4 Platform
 - Silverlight
- Tools and Technologies
 - XAML
 - C#
 - Visual Studio 2010
- Communication Styles
 - RESTful
 - SOAP
- Data Format
 - JSON
 - XML



Thanks