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Collaborative Service Clouds

Artificial Intelligence and Human-Computer Interaction group

➤ *Agent-Oriented and Service-Oriented Computing*

➤ *Intelligent User Interfaces*

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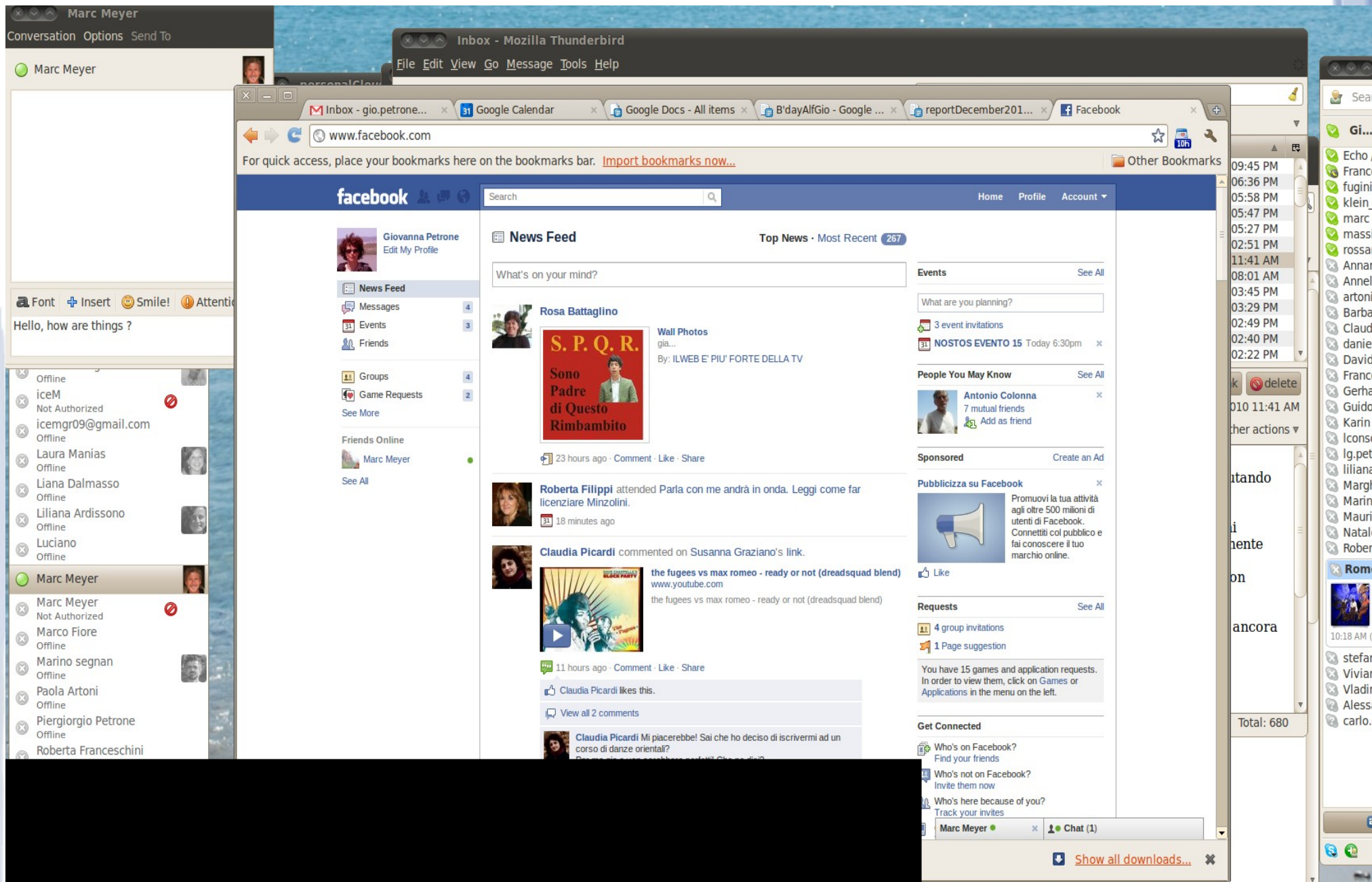
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Today...



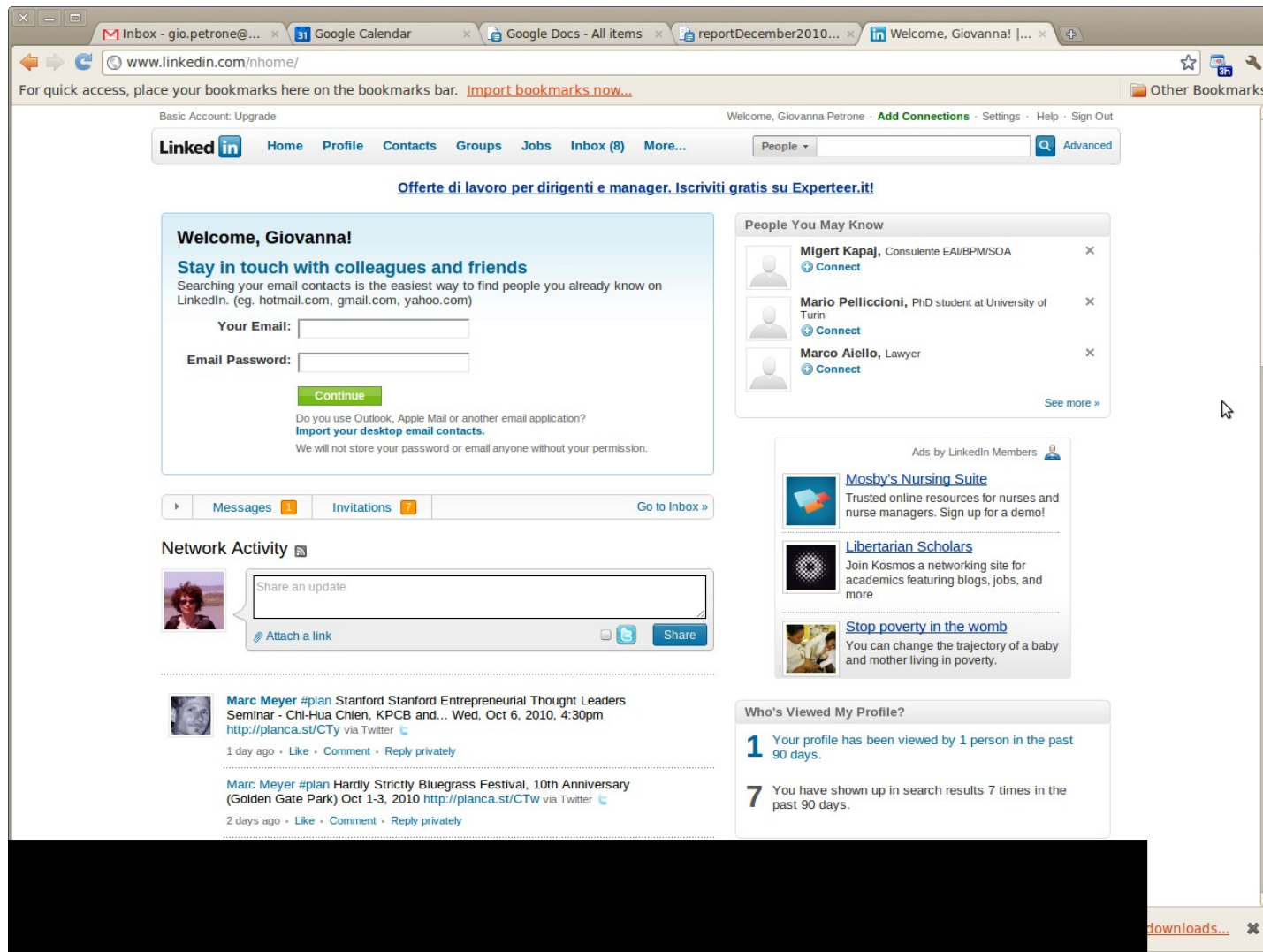
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Community on-line - I



Community on-line - II

LinkedIn (www.linkedin.com): social software supporting a professional social network



Community on-line - III

Anobii (www.anobii.com): *social software* supporting a book-based social network

The screenshot shows the Anobii website with the following elements:

- Header:** "aNobii" logo on the left and "Italiano | Other languages" on the right.
- Main Text:** "List books, Share thoughts, Meet people."
- Registration Box:** "Registrati gratis in 10 secondi" and "Già membro? [Entra](#)". A red starburst graphic says "100% FREE".
- Quote:** "aNobii offre molto più di ogni altra community di lettori che puoi trovare online" - Lifehack.
- Book Selection:** A grid of six book covers including "Il Signore degli Anelli", "Harry Potter", and "Enrico Brizzi".
- Search Bar:** "Per iniziare a curiosare, scegli uno di quelli presenti nella pagina..." and "... o inserisci il titolo di un libro:" with a search input field and a "VAI" button.
- Footer:** "La tua regione: [Italy](#) Italiano | Other languages".

[Chi è aNobii](#) | [blog](#) | 7,307,666 libri in costante aumento ...

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Social tagging sites

Picasa Web Albums - Giovanna - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://picasaweb.google.com/Gio.Petrone

Most Visited Getting Started Latest Headlines

Privati - Usc... Servizi banc... Spillo54_Me... pubsubhubb... Issue 38 - g... Installing th... Issue 2562 - ... Engineering... Picasa ...


Gmail Calendar Documents Web Reader more

New Features | gio.petrone@gmail.com | Settings | Help | Sign out


Picasa Web Albums My Photos People Explore Giovanna's Gallery Upload

Giovanna's Public Gallery Albums (16) Sort by: Album date | Upload date


Share




Summer2010
Aug 9, 2010
photos: 13




Summer2009
Aug 8, 2009
photos: 23




2009
May 14, 2009
photos: 8




Marino's old Pics
Feb 19, 2009
photos: 15




Winter2008-09
Jan 3, 2009
photos: 9




Eolie2008
Dec 2, 2008
photos: 27




Summer2008
Aug 12, 2008
photos: 10



family + friends at San Martino, 2008
Mar 23, 2008
photos: 32



nataleCapodanno2007
Dec 26, 2007
photos: 14



Veneto-Santi2007
Nov 1, 2007
photos: 6


People in this gallery View All

alf

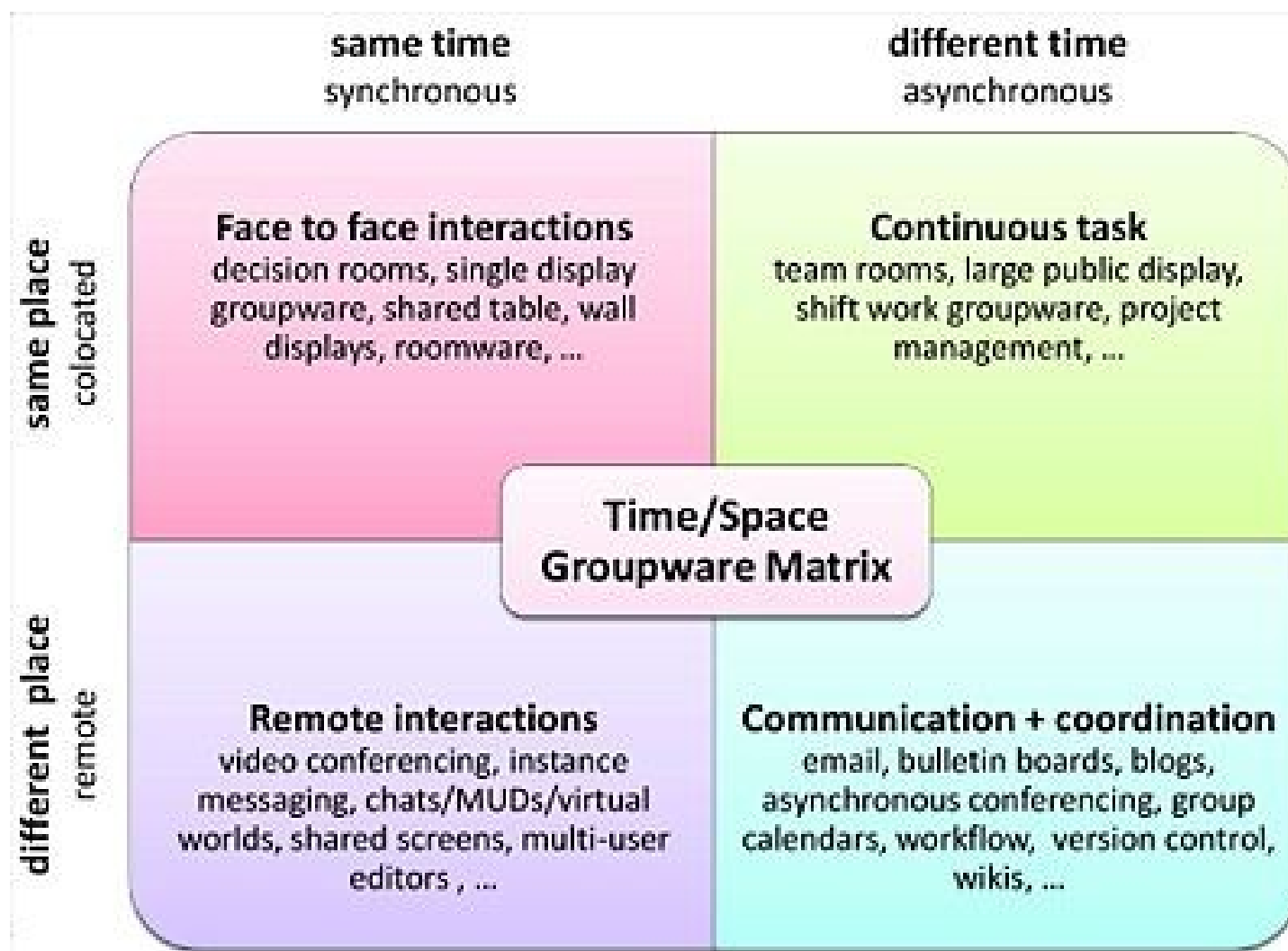
Linked Galleries View All

marqueymarc

Album Locations



2010 Google - Map data ©2010 - Terms of Use



The problems...

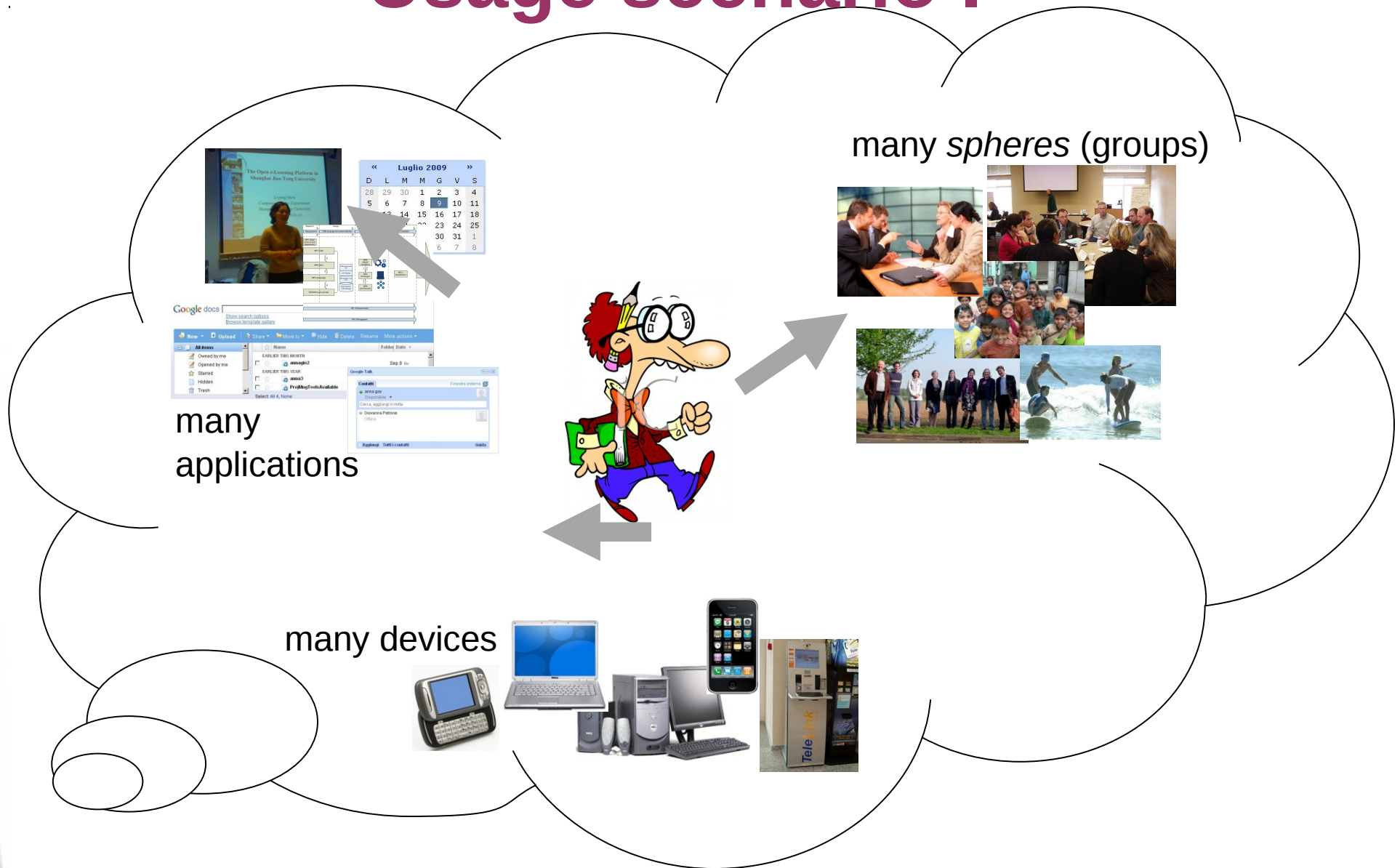


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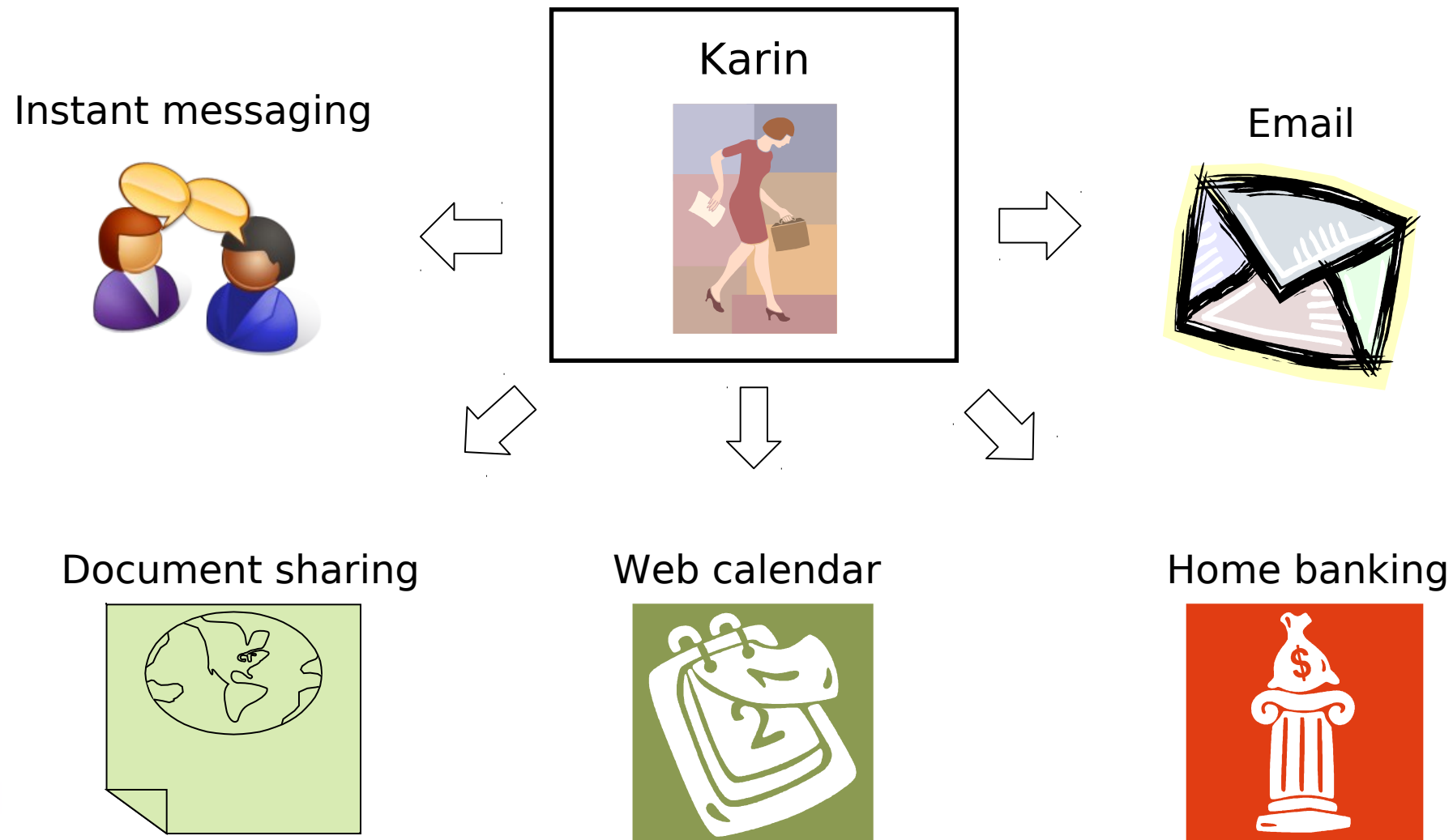
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Usage scenario I



Scenario



Motivations - I

- User uses **many applications** (email, doc editors, talk, project mgm tool, ...) and has to coordinate them manually
 - Need for a transparent synchronization of data among applications (shared context)
- User handles many **parallel collaborations** (work/private)
 - Need for a unified perspective on their state: user-centric view of tasks to be performed and of what others are doing
- User continuously **switches** among such collaborations (Mark-Su:07)
 - Context resumption can have disruptive effects on attention and emotional state (McFarlane-Latorella:02)

Motivations - II

- **E-collaboration:** web conferencing, application sharing, instant messaging, electronic whiteboard, shared workspaces, forum/discussion, etc.
- **Communication and individual scheduling:** e-mail, e-calendar, etc.

but...

all these systems are available as **distinct services**:

- there is **no integrated environment**, little or **no sharing of context information** among applications
- the user does **not have a unified view of her activities** (commitments, impediments, and tasks, both at work and in her private life)

⇒ **limited support to e-collaboration**

Background

- Large availability of wireless connectivity, broad-band internet connections and mobile devices => growing Web presence
- Service Cloud (cloud computing and SOA)
- Exploitation of heterogeneous, remote applications
- E-collaboration: web conferencing, application sharing, IM, forum, project mgmt tools, ...
- Communication and individual scheduling: e-mail, e-calendars, ...
- Development of Web Desktops representing personal workspaces – PC-less office

A proposal...



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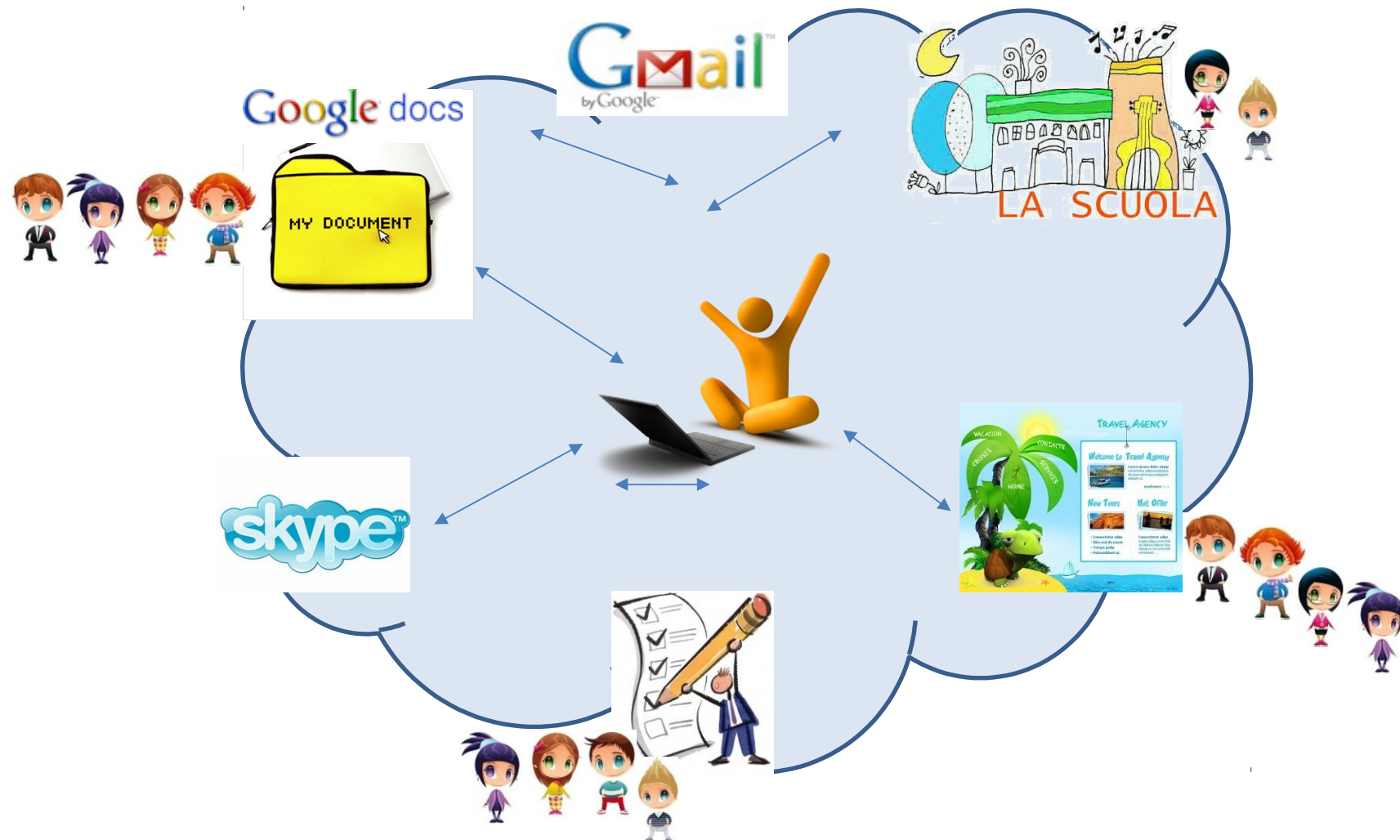
Collaborative Service Clouds:

**Ambiente e modello per la costruzione
di un desktop virtuale e collaborativo**

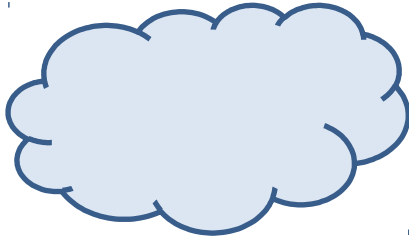


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Collaborative Service Clouds



Background



+



Cloud Computing
SaaS
(Software-as-a-Service)

enables
Collaboration
(on the Web)

Web 2.0

⇒ ***service cloud***

"a virtual web-based environment that supports user collaboration and provides a user-centered unified view of heterogeneous available services"

Proposal

The *service cloud* should be:

- **personal** (*provides a user-centered unified view of heterogeneous available services + integrated management of user activities*)
- **collaborative** (*supports user collaboration*)
- **ubiquitous** (*accessible from mobile devices, ...*)



Issues

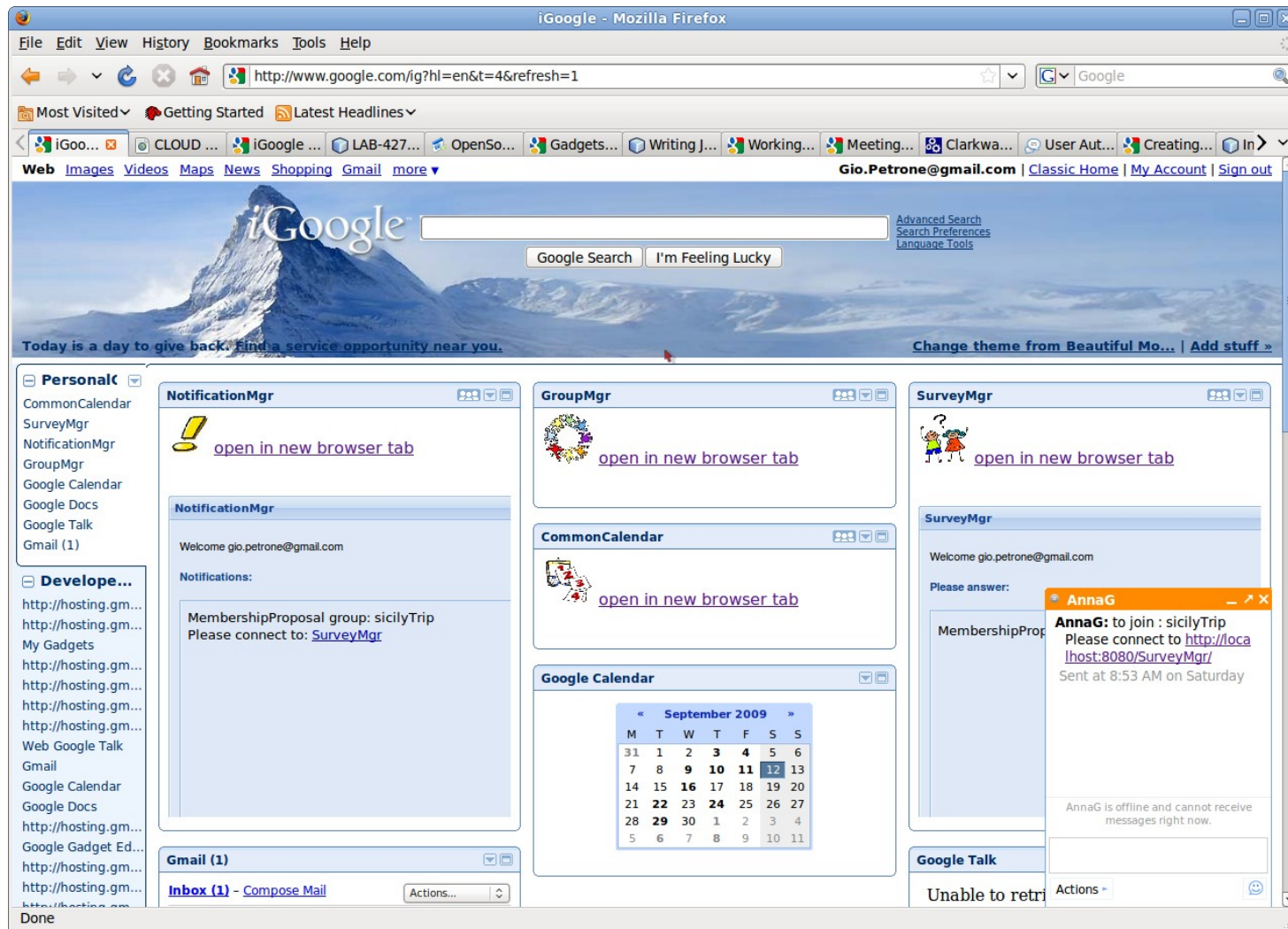
- *a user-centered unified view of heterogeneous services*
⇒ open architecture supporting the smooth **integration** of heterogeneous **services**
- *supports user collaboration*
⇒ smart, flexible, effective **collaboration** model (e.g., task management)
- *accessible from mobile devices, ...*
⇒ friendly and effective **user interaction** model (e.g., multiple workspaces)

Personal Clouds

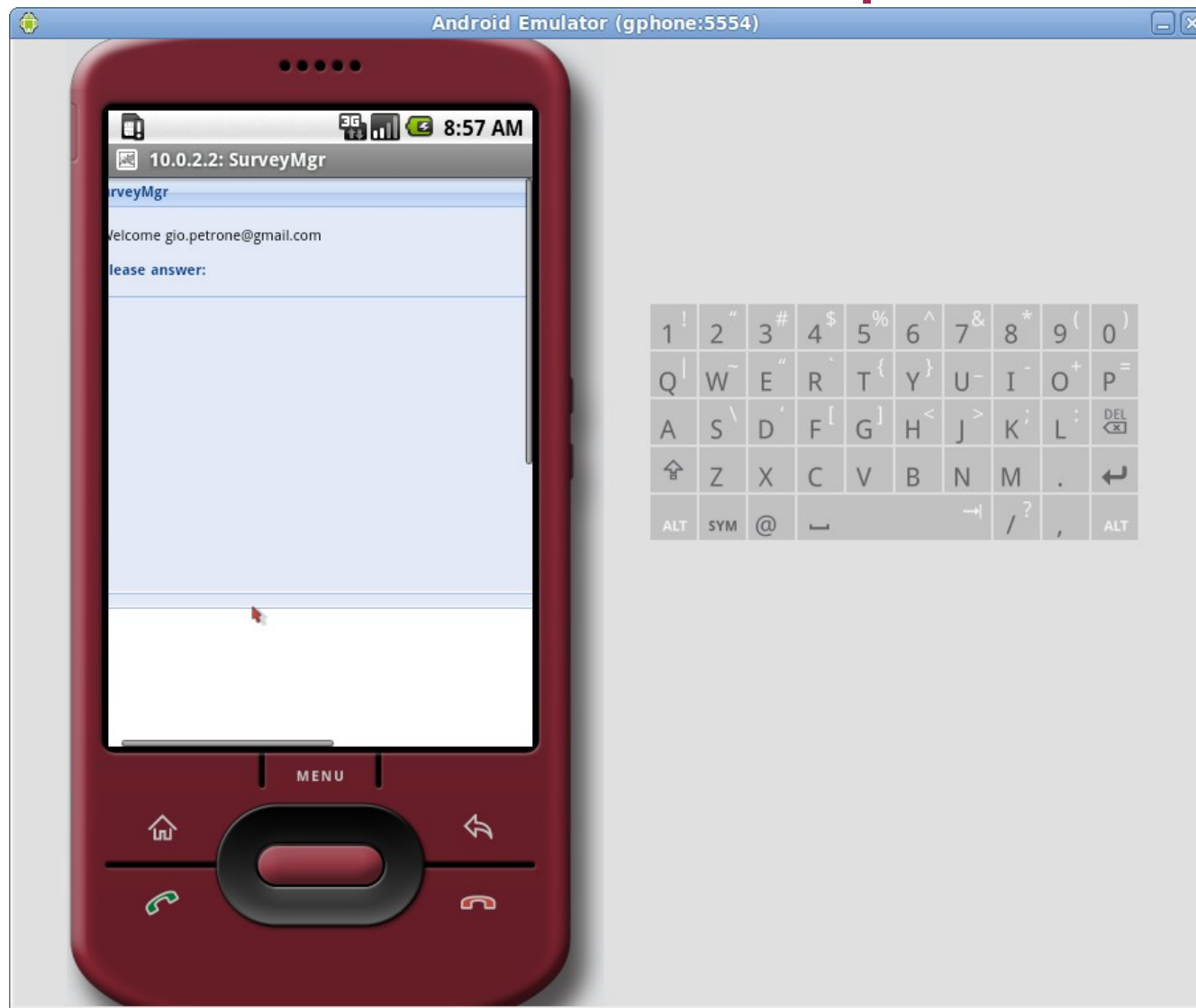
Open environment for handling *user-centric service clouds* which support

- The management of parallel activity spheres (personal activity and user collaboration contexts)
- The synchronization of external applications (calendars, document sharing apps, ...) w.r.t. the user's activity spheres

The Personal Cloud Platform (PCP): User Interface (Web desktop)



Personal Cloud UI – smart phone UI

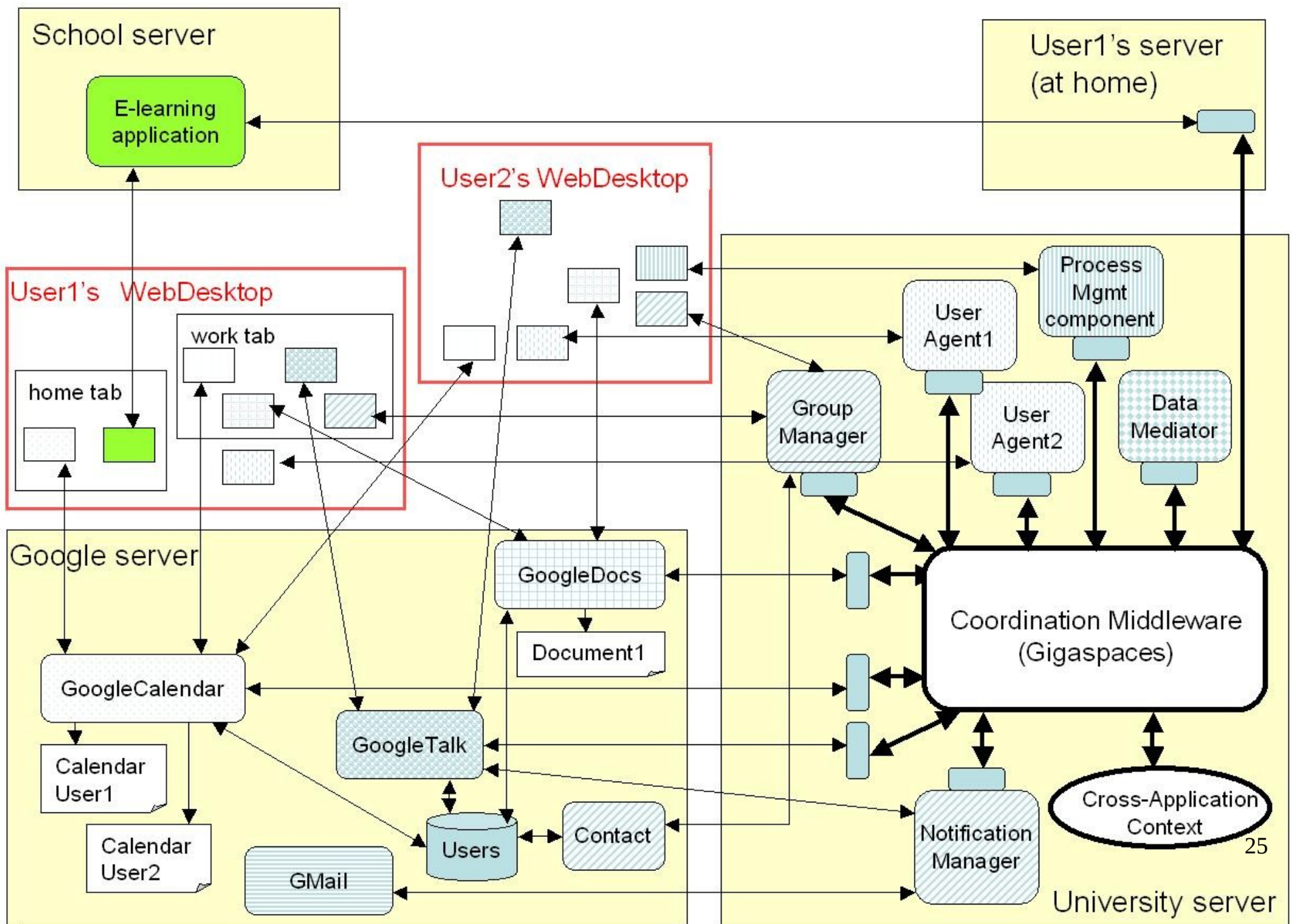


Main issues

Service cloud: a virtual web-based environment supporting user collaboration and provides a user-centered unified view of heterogeneous services

The *service cloud* should be:

- **personal** (*user-centered integrated management of user activities*) \Rightarrow open architecture supporting the smooth **integration** of heterogeneous **services**
- **collaborative** (*supports user collaboration*) \Rightarrow smart, flexible, effective **collaboration** model;
e.g., flexible **task management**, personalized **workspace awareness**
- **ubiquitous** (*accessible from mobile devices*) \Rightarrow friendly and effective **user interaction** model;
e.g., multiple workspaces; mobile access



References

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- L. Ardissono and G. Bosio. **Context-dependent awareness support in open collaboration environments.** *User Modeling And User-adapted Interaction*, Springer, 2012
- L. Ardissono, G. Petrone, M. Segnan, G. Torta. **Mixed-initiative scheduling of tasks.** Proc. 8th Int. Conf. on Web Information Systems and Technologies (WEBIST 2012), to appear



Per provare con mano qualcosina

....

Cercate: GoogleDoc sul motore

Login: utntest1 oppure utntest2 oppure utntest3
4 5 6 7

Parola chiave: passtest



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Thank you for your attention

Questions?



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