

FASSI / AFIN Panel - Nice 2016

Software Features for Mobility Services: From Legacy Software to Apps

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Panelists

- Alexander Hagemann, Hamburger Hafen und Logistik AG, Germany
 - *Software Integration Issues: Introducing a new application*
- Przemyslaw Pocheć, University of New Brunswick, Canada
 - *Service Mobility vs Mobility Services*
- *Chris Ireland, The Open University, UK*

Mobility Services

- Mobilising applications
 - Anytime, anywhere mobile access on any device to all the apps necessary to get a job done.
- Not just about building an app...
 - Access to "immobile systems" - those things we have spent many years developing!
 - Workflows
 - Security, privacy and compliance
 - Haven't we been here before: GUI/CS in the 1980/90s?

Legacy Software

- Legacy software is the software that works and we still use!
- Very likely, it isn't broken (significantly)!
- But it's not "new" tech ...
- But we can integrate the new with the old...
- To what extent can we change the software?
- What about new requirements: e.g. security?

Some Challenges & Discussion

- How do we design such systems and what are the challenges... consider a rail track welder!
- Is legacy software an asset or is it a liability?
- Do mobility services necessitate a change in the way we develop software (SaaS)?
- How are apps perceived (Toys or Atomic Activities)?
- How do we test these hybrid systems?
- How do we manage their development and maintenance?

Panel Summary (1)

- The focus was on what it was that made an application “mobile”
- Przemyslaw suggested that location was a key differentiator.
- Desktop applications do not need to be concerned about location because that does not typically change either from one execution to the next or whilst an application is executing.
- There was further discussion around whether there were other attributes that differentiate a mobile application. For example mobile devices also include a number of other sensors not typically found in a desktop computer.

Panel Summary (2)

- A question was raised relating to data and location. The point being that it is not only the device that has the property of a location but also the data being collected.
- One example is data about a shipping container. The physical location of a container is an important piece of information for a shipping company.

Software integration issues

Alexander Hagemann, FASSI, 27.07.2016

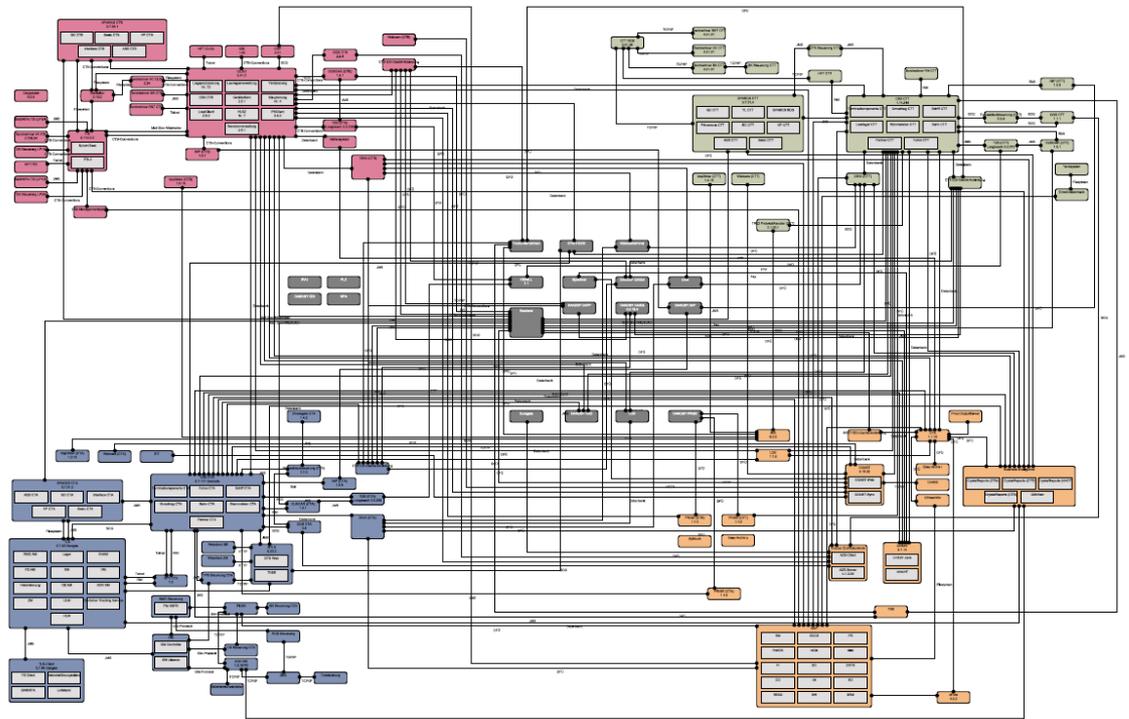


IT landscape

PANEL DISCUSSION

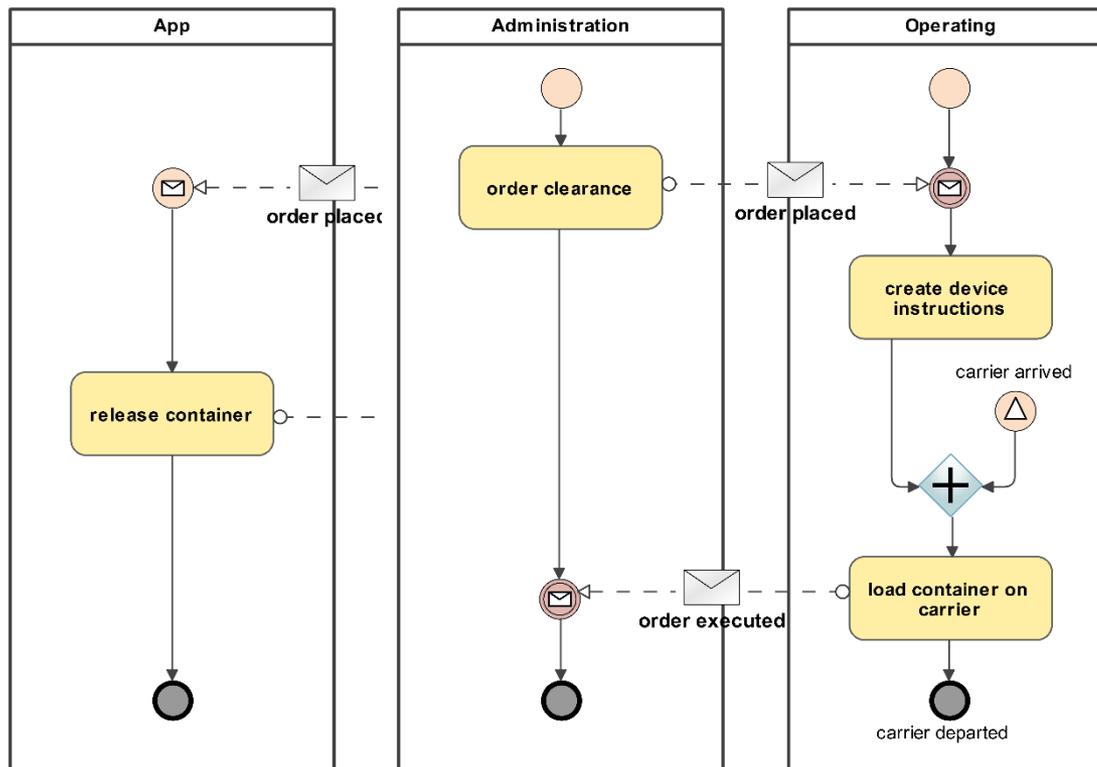
Typical properties

- historically grown
- confusing
 - » black box
- heterogeneous
 - » programming languages
 - » functional models
 - » communication styles
- complex
 - » many interfaces



Introducing a new application

PANEL DISCUSSION



Design consequences

- processes change
- process mapping onto IT landscape changes
- interfaces change

Operational consequences

- deployment during runtime required
- parallel support required
- integration testing required

Required integration tasks

PANEL DISCUSSION

IT alignment

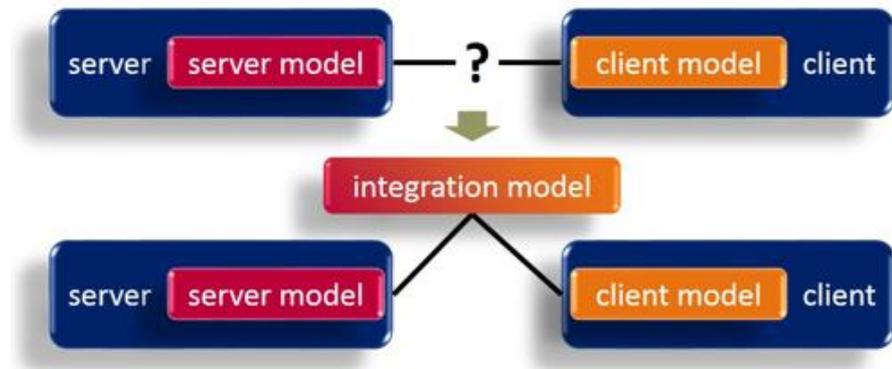
- mapping of process tasks onto applications

Interface design

- functional aspects
- dynamical aspects
- technical aspects

Migration planning

- choose strategy » big bang, server first, ...



Interface versions

PANEL DISCUSSION



Interfaces are bilateral **contracts
which may be changed by
agreement of all parties only!**

Panel on FASSI/AFIN 2016

Nice, France, July 27, 2016

Topic: Software Features for Mobility Services: From Legacy Software to Apps

Service Mobility vs Mobility Services

Panel presentation by

Przemyslaw Pocheć, University of New Brunswick, Canada

“Service” and “Mobility”

Service Mobility

- Means and apparatus to provide a service to mobile users

Mobility Services

- Services that are specifically designed for mobile users
- Features:
 - Relevant at a specific location
 - Dynamic content
- Dynamic delivery (new)

“Service” and “Mobility”

Mobility Services

→ Services that are specifically designed for mobile users

- Analogy: personal computing “services”:
 - Applications specifically designed for personal computers (as opposed to those designed for mainframe computers)

Mobility Services examples

Maps

- Legacy: physical map
- App: Google Maps

News media

- Legacy: newspaper
- App: news app

Advertising

- Legacy: a flyer
- App: proximity advertising

Mobility Services comparison

Legacy

- Static content
- Static delivery

Apps (mobility services)

- Dynamic content
- Dynamic delivery (new)

Mobility Services

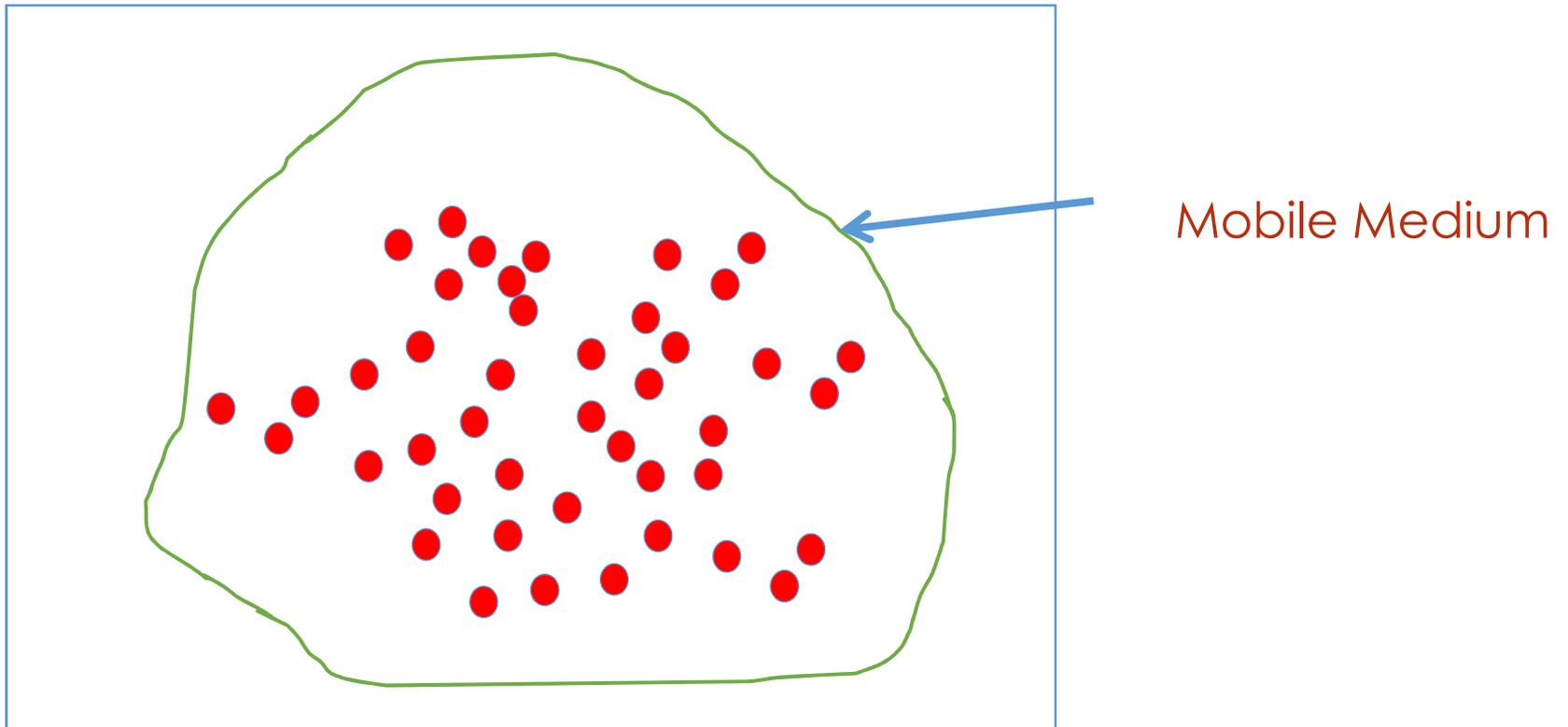
Delivery

- Local processor coupled with GPS (no networking)
 - Content tailored to the user location (global)
- Cellular
 - Content tailored to the user location (global)
- Wireless LAN and proximity sensing
 - Content tailored to the user location within the LAN coverage
- Mobile Medium
 - Content tailored to the user location
 - Delivery tailored to the user location

Creating Mobile Medium

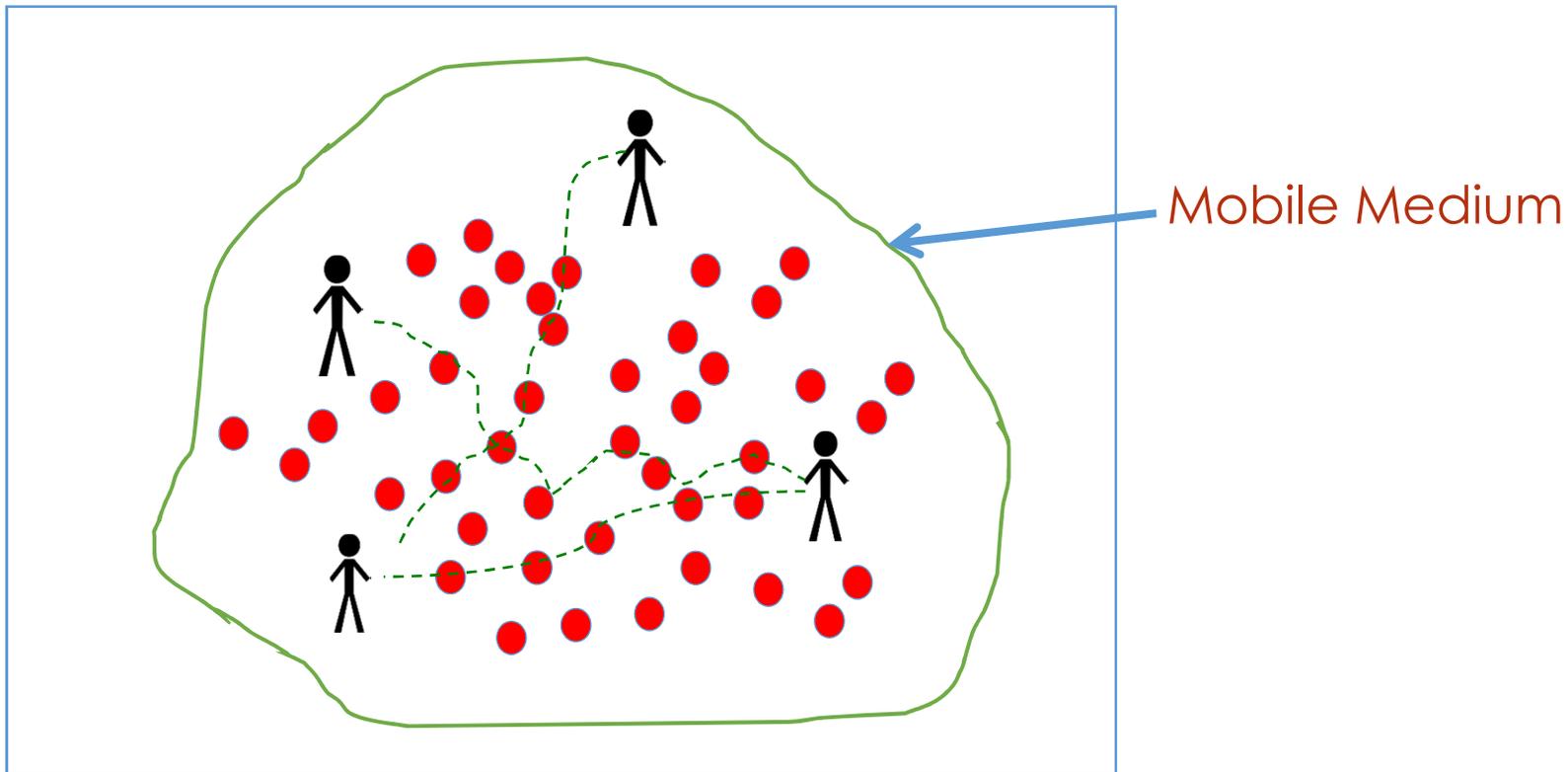
DeDoucek and P. Pochee, "M2ANET: a Mobile Medium Ad Hoc Network", Wireless Sensor Networks: Theory and Practice, The Fourth IFIP International Conference on New Technologies, Mobility and Security NTMS 2011/WSN 2011, Paris, France, Feb. 2011, pp. 1 - 4.

Deploy a large number (a cloud) of forwarding nodes over the area of interest

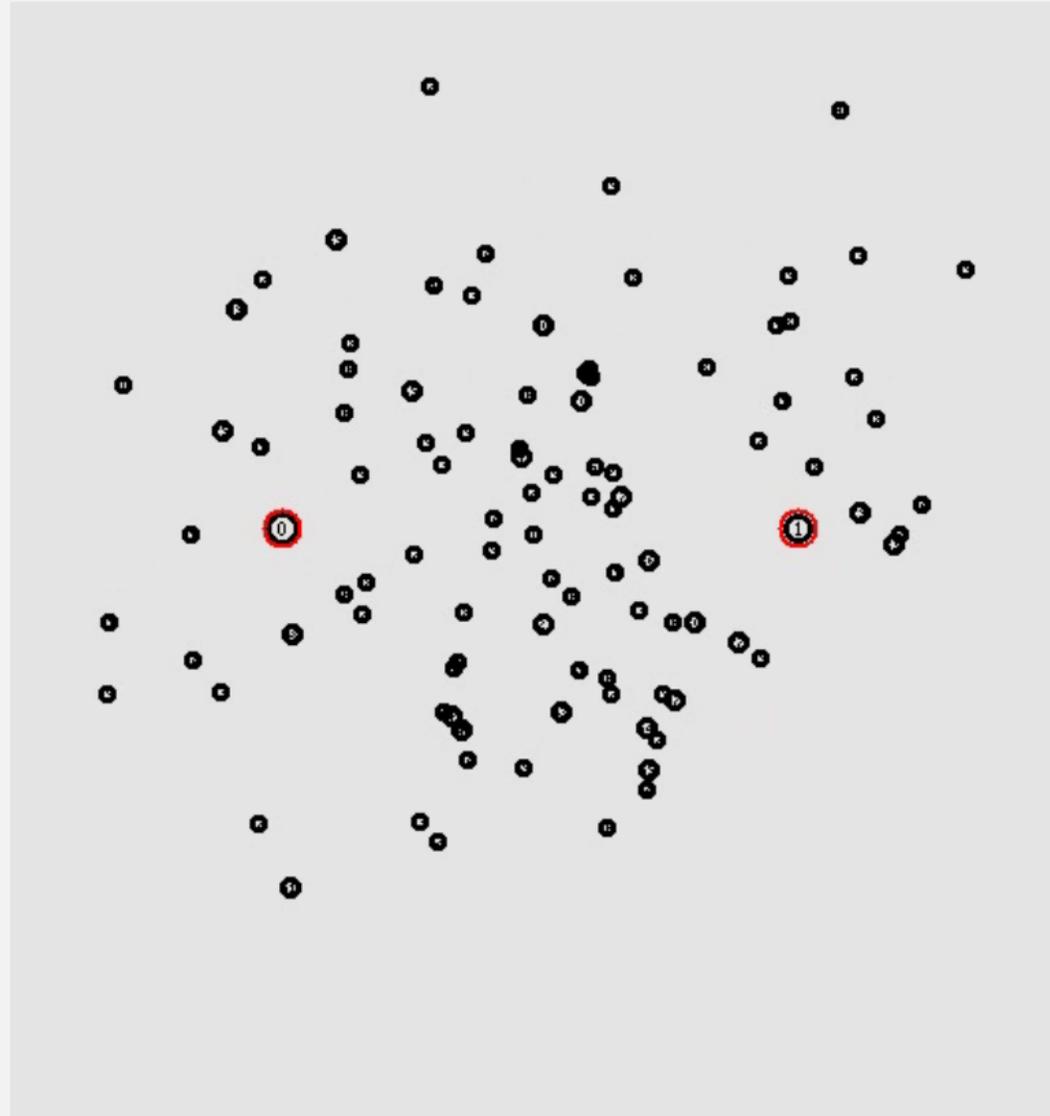


reating Mobile Medium

Users connect to the Mobile Medium and the Mobile Medium forwards the data



Sample deployment scenario



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Issues

Service detection

Service delivery

Content selection

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