A: Configuration in the mist - ENGROSS and Mobile Robotics
- Linus Åkesson
Configuration in the mist
EnGroSS and mobile robotics
K: Realtime Networking under the mist
- Klas Nilsson
Realtime networking under the mist

- Loose coupling conceptually
- Dynamism at reconfiguration
- Tight realtime operation
**Engineering Station; ABB RobotStudio**

**Legend**
- Research extension:
  - ABB prod.:
  - FSM:

**Knowledge Integration Framework**
- Tasks, Skills,... as RDF or BLOBS

**RAPID code/FSM**
- State-machine up/down-load
- RAPID socket
- Real-time
- [Labcomm]

**Human int.est.**

**jGrafChart**
- Simulink/RTW
- ExtCtrl.ext

**IRC5 HW**
- Added SW: ExtCtrl.abb

**Safety sensing/system**
B: Cloud based Semantic processing of text: Tools and applications

- Pierre Nugues
- Peter Exner
C: Programming robots with natural language via cloud computations
- Maj Stenmark
Programming robots with natural language via cloud computations
Maj Stenmark

Can you please take the switch and insert it on the box bottom.
D: Network Analysis and Visualization of the Android Committers' Networks
- Alma Orucevic-Alagic
• Mine and analyze source code repositories.

• Understand cross-team collaboration.

• Identify the most central, and the most influential contributors, cliques and subgroups.

• Visualize how changes in software project methodology and team organization affect the underlying committers’ networks.

• Visualize and track evolution of networks and metrics in order to gather relevant business intelligence data.
Network Analysis of Large Scale Open Source Projects
E: Cloud based mobile manipulation - research topics in a factory context
- Jacek Malec
Cloud-based mobile manipulation

Research extension:
ABB prod.:
FSM:

Human intention estimation

State-machine up/down-load

RAPID code/FSM

Tasks, Skills,... as RDF or BLOBS

Knowledge Integration Framework

State-machine up/down-load

RAPID socket

Real-time

[Labcomm]

Safety sensing/system

jGrafChart
Simulink/RTW
ExtCtrl.ext

RAPID code/FSM

IRC5 HW
Added SW: ExtCtrl.abb

ROS

ExtCtrl.abb

KIF

HRI

Human intention estimation

State-machine up/down-load

RAPID socket

Real-time

[Labcomm]
Research Topics in a Factory Context

1. Skill and task representation
2. Reuse of task definition
3. Efficient instruction schemes
4. Reuse of learning outcome
5. Productive mobile motions
6. Equipment modularity & flexibility
7. Loosely coupled real-time software
8. Decoupled interaction software
9. Portable computations
10. Safety with productive flexibility
F: Proximates – Mining pervasive social context from mobile phone data
- Håkan Jonsson
PROXIMATES
Mining social context from mobile phones

Time in proximity to subject by peers

Hours in proximity of subject

Peers ranked by time in proximity

- Facebook friend
- Unknown relation
The Role of Configuration Management in Outsourcing and Distributed Development

- Lars Bendix
The Role of Configuration Management in Outsourcing and Distributed Development

Lars Bendix  
bendix@cs.lth.se  
Department of Computer Science  
Lund University  
Sweden  

Christian Pendleton  
Christian.Pendleton@softhouse.se  
Softhouse Consulting  
Malmö  
Sweden
Distribution

Distribution is good:

• it gives a larger pool of talents and specialists
• allows cooperation between departments/companies
• facilitates integration for mergers and acquisitions
• allows around the clock work
• gives more flexibility in scaling up and down projects
Distribution is bad:
- it is more complex to manage
- it creates silos between groups
- people don’t understand and trust each other
- you lose control over remote teams/people
- …
Distribution

Distribution is good:
• it gives a larger pool of talents and specialists
• allows cooperation between departments/companies
• facilitates integration for mergers and acquisitions
• allows around the clock work
• gives more flexibility in scaling up and down projects

Distribution is bad:
• it is more complex to manage
• it creates silos between groups
• people don’t understand and trust each other
• you lose control over remote teams/people
• …
CM and Distribution

Configuration Management already handles “distribution”:
  • programmers are rarely co-located
  • developers are often distributed (also in time)
  • we handle development AND maintenance
  • where is the Project Manager?
Our goals

What are we trying to obtain:

• make sense of DD
• what special challenges are there in DD
• what challenges can be alleviated by CM support
  • “same old stuff”
  • re-think implementation
  • oops – that’s a new one ;-)
Conclusions

Configuration Management involvement in DD challenges:

- *not related*
- *weakly related*
- *strongly related, but not particular to DD*
- *strongly related*
Conclusions

Configuration Management involvement in DD challenges:

• not related
• weakly related
• strongly related, but not particular to DD
• strongly related

Come and talk to us:

• project manager
• programmer
• developer
• configuration manager
• project/product owner

http://fileadmin.cs.lth.se/cs/Personal/Lars_Bendix/Research/SCM4GSD/
H: Some like it hot - how to keep the pot boiling via IoT
- Björn A Johnsson
SOME LIKE IT HOT

BJÖRN A. JOHNSSON, BORIS MAGNUSSON
Demo System

WHAT DOES IT DO?

{On|Off}

{On|Off}
PalCom
MIDDLEWARE FRAMEWORK

• Different Devices – Different Protocols
• Multiple locations – Heterogeneous networks
• Putting it all together – Assemblies

“PalCom is a middleware framework used to combine the services offered by devices in an easy and flexible manner. By doing this, new functionality can be created by coordinating already existing services in new formations.”
The itACiH project
LARGE SCALE, REAL WORLD USAGE OF PALCOM

http://itacih.cs.lth.se
I: The JastAdd Ecosystem
-Emma Söderberg
The JastAdd Ecosystem

- Meta-compilation system
- Modular, declarative prog.
- DSL – Java, Modelica, ...

New features:
- documentation,
- profiling,
- editing, ...
J: WozARd: A Wizard of Oz tool for mobile AR
- Günter Alce
WozARd
A Wizard of Oz Tool for Mobile AR

Gunter.Alce@sonymobile.com
Klas.Hermodsson@sonymobile.com
Mattias.Wallergard@design.lth.se
L: Introducing Service-level Awareness in Clouds
- Karl-Erik Årznén
Introducing Service-Level Awareness in Clouds

Cristian Klein\textsuperscript{1}, Martina Maggio\textsuperscript{2}, Karl-Erik Årzén\textsuperscript{2}, Francisco Hernández-Rodriguez\textsuperscript{1}
1: Umeå University 2: Lund University

- Problem: Unexpected events (e.g. flash crowds and hardware failures) may overload data centers
- Standard solution: Over-provisioning of resources
- Idea: Reduce service-level to avoid data center overload (e.g. turn off optional features)
- Proposal:
  - Resource manager designed using game theory
  - Local application controllers designed using control theory
- Results:
  - Come to the poster and see
- Conclusions:
  - Clouds can more robustly withstand capacity shortages
  - Applications reduce their service levels (turn off optional features)
  - Infrastructure rebalances resources among hosted applications