Home Office 2.0 - Collaborate Working

It's all about context

Wintersemester 2009/2010
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Summary

- Home Office 2.0
- Vision
- Universe of discourse
- Smart Collaborative Workplace
- Context
  - Computer based context
  - Context examples
- Problems
- Related Computer Science discussion
- Next steps
Work changed
Home Office 2.0

Information is available 24/7

Work today involves:

• No geographical boundaries
• No time zones
• Multiple projects
• Multiple roles / specialisations
• Multiple culture and languages
Hey Bob. Do you know the bug last year? I fixed it using...
Today I need the alternate solution. Do you know?

I know exactly what you mean. The solution was...

Senior Developer

Junior Developer, Teammember since two months
Universe of discourse

- Software Development
  - Distributed teams
  - Multiple projects
  - Multiple roles
  - Application lifecycle management
- Collaborative Work
- Knowledge Work
Knowledge Work

Definition by Encyclopaedia Britannica:

...of work in an information society involves manipulating abstract information and knowledge, rather than directly processing, manufacturing, or delivering tangible materials. Such work is called knowledge work. [BRITANNICA]
Knowledge work

Working Memory

Exocortex
Knowledge work

Collaborative Situation

Personal Exocortex

Project Exocortex

Personal Exocortex
Knowledge work

Project StIXDB

Project MySC

Project VCIndexer

Project leader

Developer

Build manager
Knowledge Work Problems

- Switching between Task/Projects (costs 20%-40% of time concentration) [UMICH]
- Information overload
- Distractions
- Stressed out
  => cognitive overload [Kirsch-2000]
Smart Collaborative Workplace

- Support Current Worktask
  - Show only relevant information
  - Assist information retrieval
  - Manage applications
- Support task switch
- Support different devices
- Find the person who I need [Maehlmann-2009]
- Support team work (different experts need different tools/informations)
„Always consider the Context“
Andy Hunt [Hunt-2008]

„Focusing knowledge work with task context“
Mik Kersten [Kersten-2007]

It's all about context
What is Context

• Language sciences
  • verbal context
  • social context
• Working set of information for the current situation
• Context defines the meaning of information
Computer based context

- System context
- Context awareness
- Dialog context
  - Speech engine
  - Topic map
- Task context
- Location
- ...

...
Context examples

Using context for messages

Found at eXtreme feedbacks [XF]
Context examples

Context based information retrieval

Google Search for "jira ldap java.lang.reflect.InvocationTargetException"

Results 1 - 10 of about 362 for jira ldap java.lang.reflect.InvocationTargetException

Jira LDAP User Utility - JIRA Extensions - Atlassian Documentation
The Jira LDAP User Utility plugin needs no further configurations as long as the ..... Now i've got this error: java.lang.reflect.InvocationTargetException...
confluence.atlassian.com/.../JIRAEXT/Jira+LDAP+User+Utility - Im Cache - Ähnlich

[#DIRSTUDIO-475] Error java.lang.reflect.InvocationTargetException...
Error java.lang.reflect.InvocationTargetException with IPv6 Addresses ... When creating a Connection to a LDAP-Server with an IPv6-Address gives a java.lang.reflect. ... If so please just reopen this Jira. Regards, Stefan...
issues.apache.org/jira/browse/DIRSTUDIO-475 - Im Cache - Ähnlich

[#WCM-189] Virtualization Error related to LDAP Authentication...
Error java.lang.reflect.InvocationTargetException at sun.reflect ...
https://issues.atlassian.com/browse/WCM-189 - Im Cache - Ähnlich

Release Notes - xplanner - Version 0.8b4 - HTML format - jira...

[jira] Commented (DIRSTUDIO-475) Error java.lang: msg#00349 dev... - [Diese Seite übersetzen]
When creating a Connection to a LDAP-Server with an IPv6-Address gives a java...
Context examples

kaffee in der Nähe von Berliner Tor 7, 20099 Hamburg
Kategorien: Café, Cafés

FIRST CLASS COFFEE OHG - mehr Infos
Lübecker Straße 1, 22087 Hamburg - 040 25308667
Kategorie: Kaffee
Beoordeling schrijven

Gnosa Café - mehr Infos
Lange Reihe 93, 20099 Sankt Georg, Hamburg - 040 243034
**** 67 Beoordelingen
Beoordeling schrijven
"Berichte stehen, Bin nicht zufällig, sondern ganz gezielt auf einen Tipp hin ..."

relexa hotel Bellevue - mehr Infos
An der Alster 14, 20099 Hamburg - 040 284440
**** 359 Beoordelingen
Beoordeling schrijven
"Wie meine treuen LeserInnen wissen, gehen wir gerne essen. Zu besonderen ..."

Café Klimabahn - mehr Infos
Context examples

- Mylyn

```java
landscape.addConnection(con);
saveConfig(mgr, landscape);

new DBConnection - de.aysada.stixdb.core.dao.connectionmgr.
StIXD
Message
return

} catch (DBLandscapeConfigManager - de.aysada.stixdb.core.dao.
StIXD
Message
return

} catch (DBLandscapeEditorPageUtil - de.aysada.stixdb.connection.
StIXD
Message
return

} catch (DATA_CONVERSION - org.omg.CORBA.
StIXD
Message
return

} catch (Press 'Ctrl+Space' to show Template Proposals.
StIXD
Plugin.log.logError(e);
```
Context examples
Context examples

- Context-Aware, Adaptive Information Retrieval for Investigative Tasks [Zhen-2007]

Figure 1. HARVEST screen shots showing the investigation of an alleged political fraud: (a) a news story found in the current context about a person named Rinz; (b) a set of phone calls relevant to the current context.
Problems

- Isolated solutions:
  - Tool
  - Domain specific
  - Single user
  - Work process

- Building the context

- Does it match to the context (false / positive)

- Context changes
  - Over time
  - Different use cases
Related Computer Science discussion

- Context
  - World of N-Tuples
  - Feature Vector
  - Context Visualization
- Information Organisation (Exocortex)
- Application Lifecycle Management
- Computer Supported Cooperative Work
- Mining User Interaction
- Information Retrieval
- Self Adaptive Software
Next steps

Integrate tools
- Desktop integration
- Merge different context types

Team Support
- Build team context
- Track team informations
- Find Informations
- Find the right person
- Manage applications

What is needed?
- What is relevant?
- What are information objects

Context
- When to show a message?
- Keep context clean
- Algorithm to manage context
- Little tools to manage ideas
- Filter informations
Scenario Brook's Law [Brooks-1978]

Make it easy to add developer to a delayed project

Hey Bob. Do you know the bug last year.. I fixed it using... Today I need the alternate solution. Do you know?

I know exactly what you mean. The solution was...

Senior Developer

Junior Developer Teammember since two months
References

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