

# Home Office 2.0 - Collaborate Working

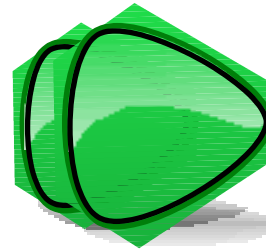
## **It's all about context**

Wintersemester 2009/2010  
HAW-Hamburg  
Karsten Panier

# 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

# Vision

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



Senior Developer

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



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

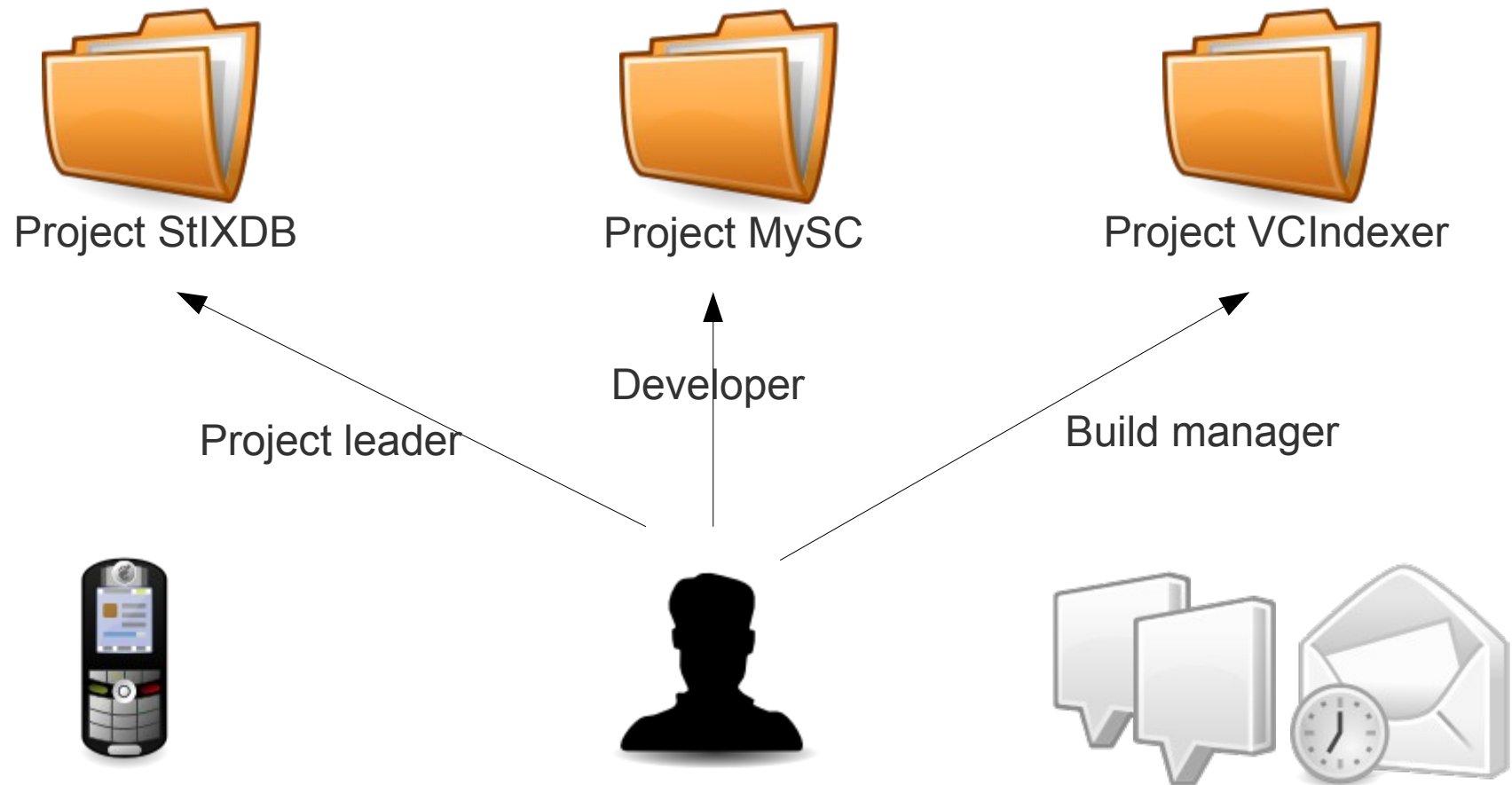




# Knowledge work



# Knowledge work



# 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]

**Its 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



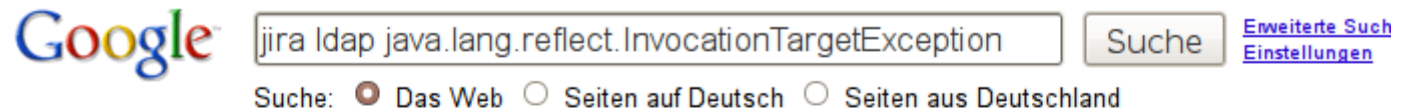
Using context for messages

Found at  
eXtreme feedbacks [XF]



# Context examples

## Context based information retrieval



Web Ergebnisse 1 - 10 von ungefähr 362 für **jira ldap java.lang.reflect.Inv**

[Jira LDAP User Utility - JIRA Extensions - Atlassian Documentation ...](#) - [ [Diese Seite übersetzen](#) ]

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 ...](#) - [ [Diese Seite übersetzen](#) ]

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 ...](#) - [ [Diese Seite übersetzen](#) ]

retrying **java.lang.reflect.InvocationTargetException** at sun.reflect. .... Powered by a free Atlassian **JIRA** open source license for Alfresco. ...

[https://issues.alfresco.com/browse/WCM-189](#) - [Im Cache](#) - [Ähnlich](#)

[Release Notes - xplanner - Version 0.8b4 - HTML format - jira ...](#) - [ [Diese Seite übersetzen](#) ]

[XPR-224] - "**java.sql.SQLException: No operations**" error after application ... </li><a href='http://jira.codehaus.org/browse/XPR-389'>XPR-389</a>] - **LDAP ...** mis-entry triggers

**java.lang.reflect.InvocationTargetException** </li> </li><a href='http://jira.codehaus.org/secure/ReleaseNote.jspa?...> - [Im Cache](#) - [Ähnlich](#)

[\[jira\] 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.lang.reflect.InvocationTargetException**"-Error-Message when doing "Check ...

[osdir.com/ml/dev-directory...03/msg00349.html](#) - [Im Cache](#) - [Ähnlich](#)

Verantwortlicher Tester: [Panier Karsten](#)

Letzte Änderung durch: Panier, Karsten

### Beschreibung

Das Plugin in um Benutzer aus dem LDAP in Jira  
Es sieht danach aus, dass es nicht mit der Versio  
Stacktrace:

```
java.lang.reflect.InvocationTargetException  
at sun.reflect.NativeMethodAccessorImpl.invoke0(  
at sun.reflect.NativeMethodAccessorImpl.invoke(N  
at sun.reflect.DelegatingMethodAccessorImpl.invo  
at java.lang.reflect.Method.invoke(Method.java:615  
at webwork.util.InjectionUtils$DefaultInjectionImpl  
at webwork.util.InjectionUtils.invoke(InjectionUtils.  
at webwork.action.ActionSupport.invokeCommand  
at webwork.action.ActionSupport.execute(ActionSu  
at com.atlassian.jira.action.JiraActionSupport.exec
```

# Context examples

## kaffee in der Nähe von Berliner Tor 7, 20099 Hamburg

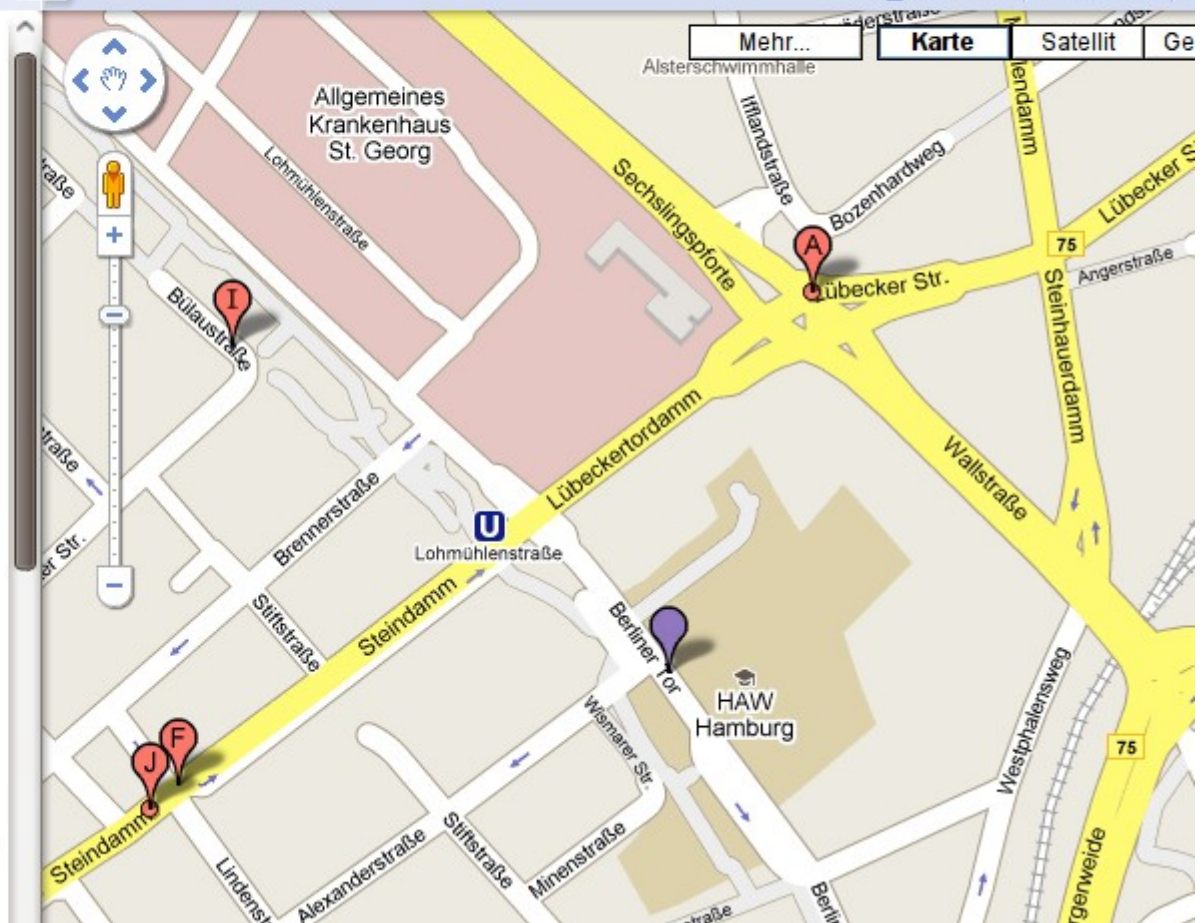
Kategorien: [Café](#), [Cafes](#)

**A** [FIRST CLASS COFFEE OHG](#) - [mehr Infos](#)  
Lübecker Straße 1, 22087 Hamburg - 040 25308867  
Kategorie: **Kaffee**  
[Beurteilung schreiben](#)

**B** [Gnosa Café](#) - [mehr Infos](#)  
  
Lange Reihe 93, 20099 Sankt Georg, Hamburg - 040 243034  
★★★★★ [67 Beurteilungen](#) - [Beurteilung schreiben](#)  
"Berichte stehen. Bin nicht zufällig, sondern ganz gezielt auf einen Tipp hin ..."

**C** [relexa hotel Bellevue](#) - [mehr Infos](#)  
  
An der Alster 14, 20099 Hamburg - 040 284440  
★★★★★ [359 Beurteilungen](#) - [Beurteilung schreiben](#)  
"Wie meine treuen LeserInnen wissen, gehen wir gerne essen. Zu besonderen ..."

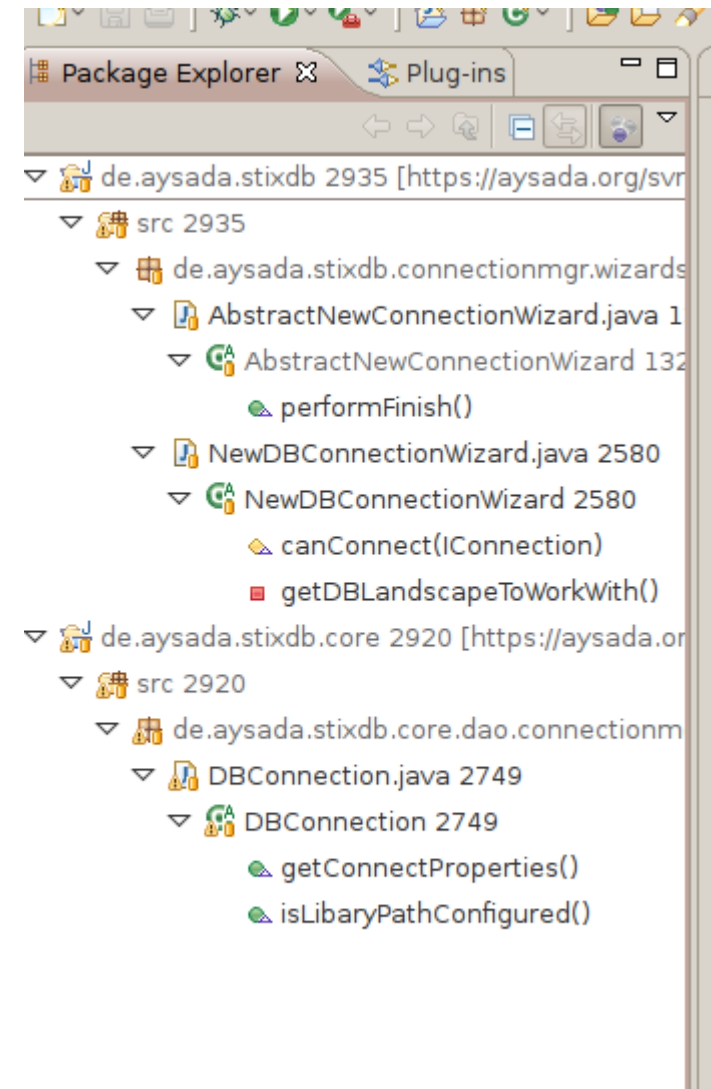
**D** [Café Libel](#)



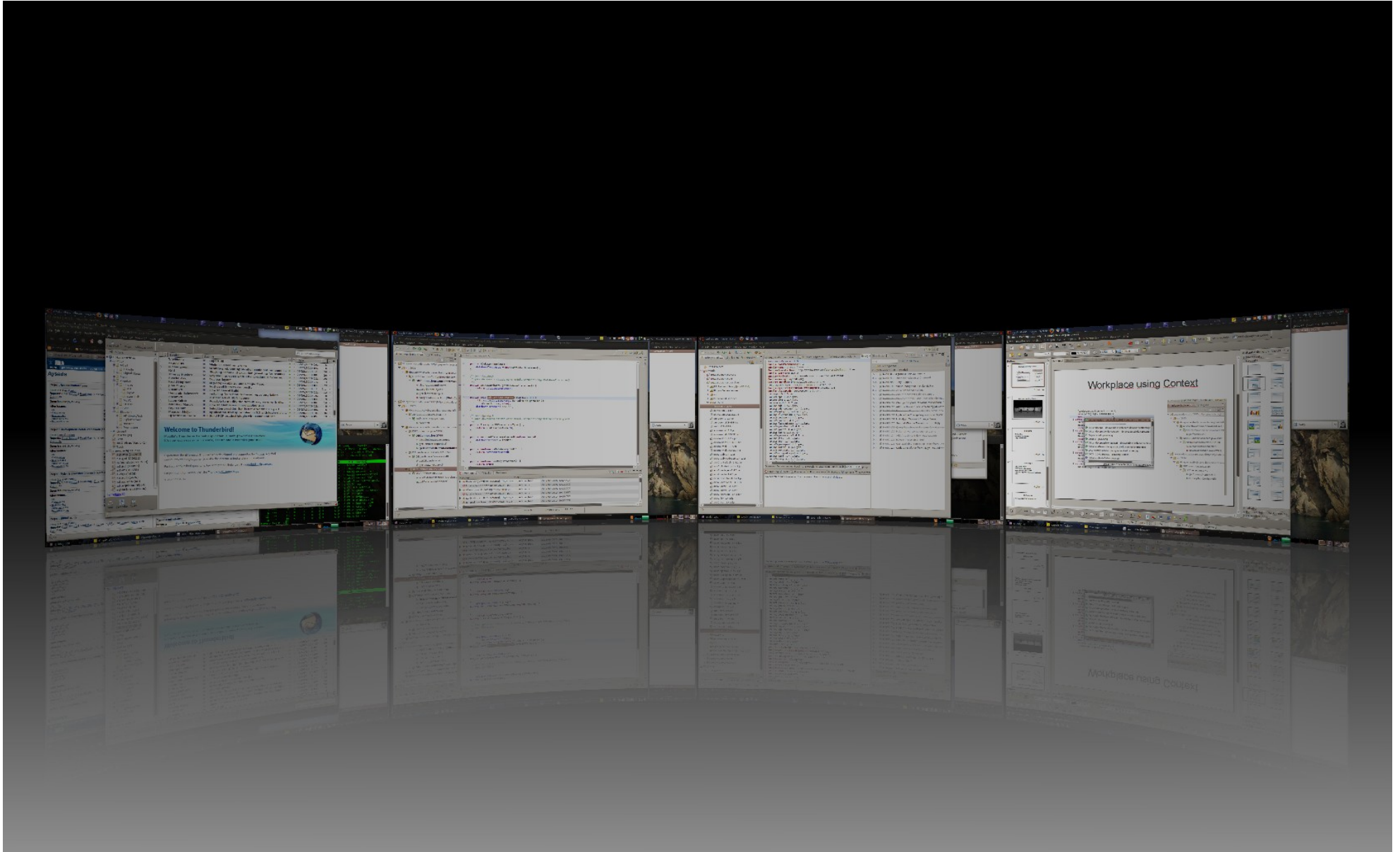
# Context examples

- Mylyn

```
landscape.addConnection(con);
saveConfig(mgr, landscape);
new D
} catch (DBConnection - de.aysada.stixdb.core.dao.connectionmgr
StIXD
Messa
return DBLandscape - de.aysada.stixdb.core.dao.connectionmgr
} catch (DBLandscapeConfigManager - de.aysada.stixdb.core.dao.c
StIXD
Messa @ Deprecated - java.lang
return Double - java.lang
} catch (DBLandscapeEditorPageUtil - de.aysada.stixdb.connection
StIXD
Messa DBLandscapeEditorPageUtil - de.aysada.stixdb.connectionmgr.tree
return DAOFactoryFacade - de.aysada.stixdb.core.dao
} catch (DATA_CONVERSION - org.omg.CORBA
StIXD
Messa DatabaseMetaData - java.sql
return
} catch (Press 'Ctrl+Space' to show Template Proposals
StIXDBPlugin.log.logError(e);
```



# Context examples



# Context examples

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

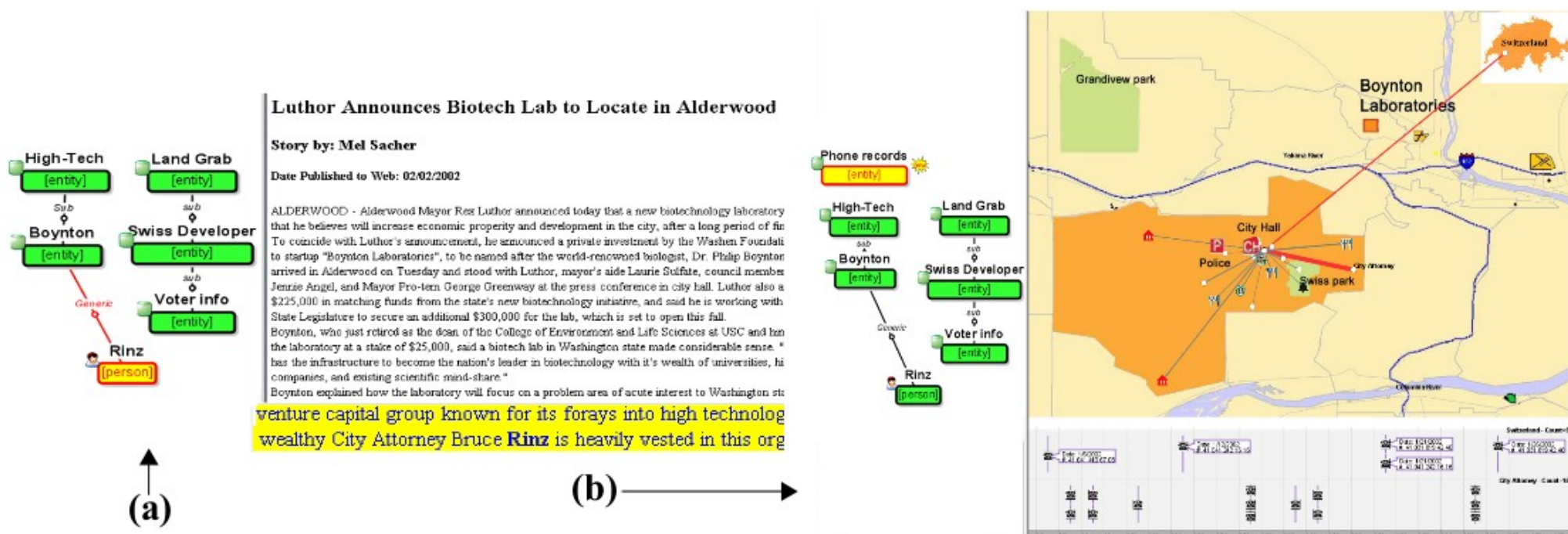


Figure 1. HARVEST screen shots showing the investigation of an alleged political fraud: (a) a news story found in the current context about a person named Rinz; (b) a set of phone calls relevant to the current context.

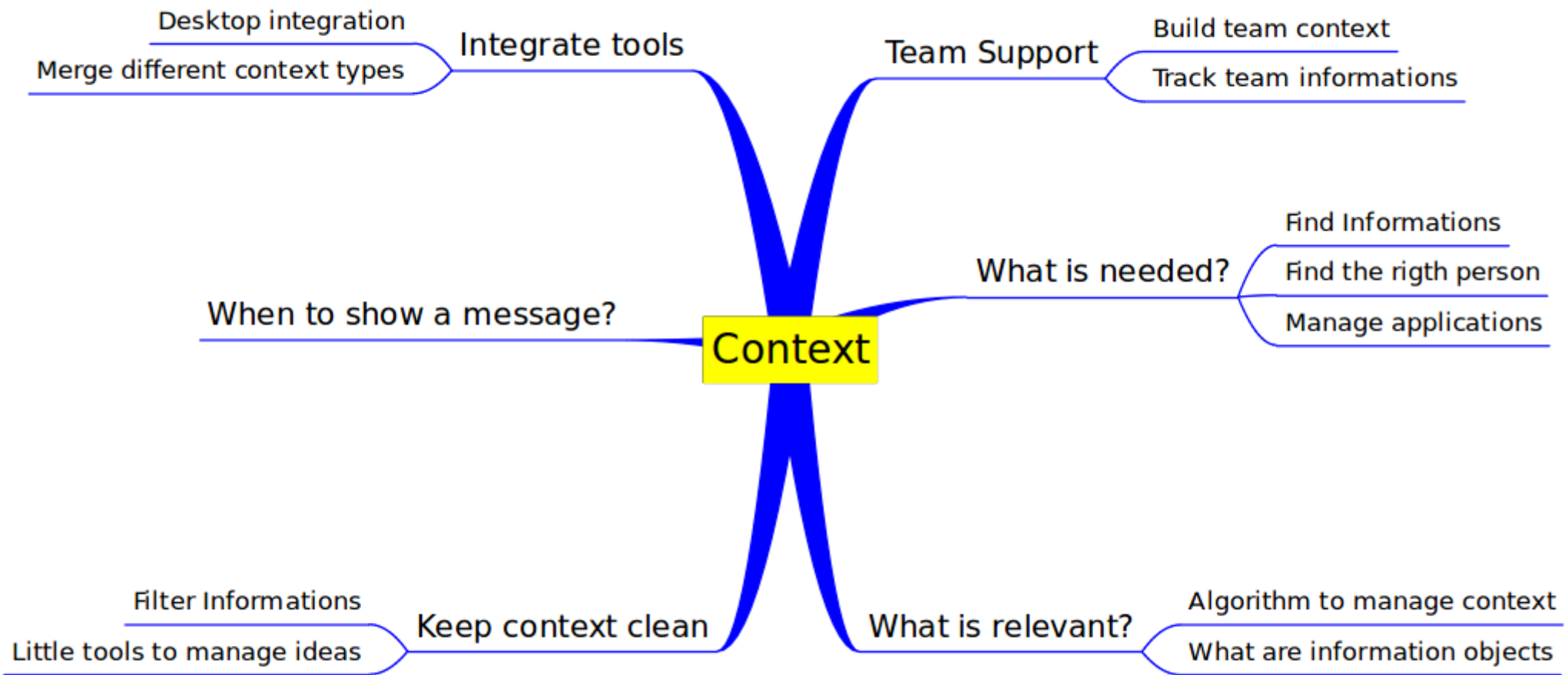
# Problems

- 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





# 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?



Senior Developer

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



Junior Developer Teammember  
since two months

# References

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# References

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  - David Kirsch
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- [XF]
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  - Stand: 10.08.2009
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