

# Workshop

## Support services for e-Learning Using Language Technologies

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Language Technologies for Lifelong Learning (LTfLL) project  
14.12.2010



# Outline

- Workshop
  - Introduction
- Services
  - Brief introduction LTfLL project
  - Presentation services, demo
  - Combination of services: the **Long Thread**
- Activities
  - Provide feedback
- Final Remarks
  - Wrap up and follow-up activities

# Workshop - Aim

- **Aim:** Validate e-Learning support services
  - Value for learning (not technical innovation!)
  - Get a general idea about the services, and the possible combination of them (*Long Thread*)
  - Provide feedback about Long Thread
    - Benefits
    - Weaknesses
    - Obstacles

# Language Technologies for Lifelong Learning (LTfLL)

FP7-TEL: 3 year project 2008-2011  
11 partners (8 countries, 6 languages)



## LTfLL Objective

Offering learners a set of next-generation **support services** that

- Require only **limited tutor-based support**.
- Make use of **Language Technologies**: work semi-automatically

## LTfLL Concept

Look at concrete problems faced by teachers and students

- Tutor's workload
- Too much data, different knowledge resources
- New ways of interaction, difficult to give feedback (chats, forums)
- Difficult to identify current level of knowledge

# Language Technologies

- Recognize, generate or transform human language: spoken, written
- Examples:
  - Machine translation
  - Topic detection
  - Summarization
  - Indexing
  - Ontologies

# Language Technologies Services

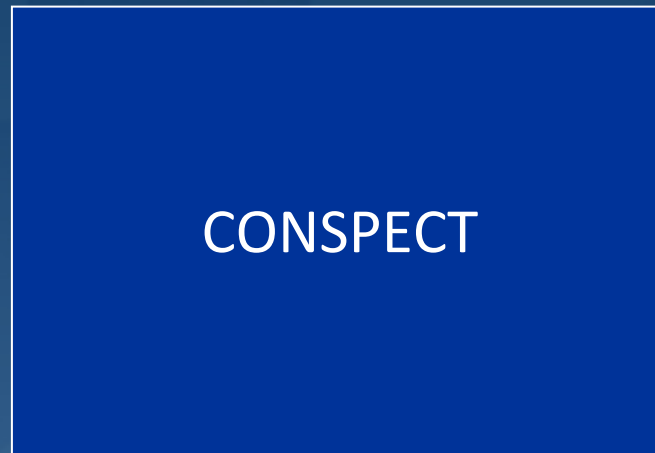
- Positioning the Learner
  - **CONSPECT** – Formative feedback
- Student and Tutor Feedback
  - **PenSum** – Online Synthesis Advisor
  - **PolyCAFe** – Chat & Forum Analysis & Feedback
- Social and informal learning
  - **iFLss** – Knowledge discovery

# CONSPECT

- **Problem:** Tutors and students have problems to discern how individuals/groups cover key topics of study
- **CONSPECT:** Extract concepts & relations from texts, and support comparisons :
  - texts vs. learning materials (expecting learning outcomes)
  - texts vs. group of peer texts
  - texts at different points of time (conceptual development)

# CONSPECT

Texts  
(Blog)



Concept Maps  
(Combined)  
List of Concepts  
(overlapping, missing)



# CONSPECT.

## Concepts for Evolutionary Psychology- student

<< back



- biologisch
- dier
- gedrag
- men
- mens
- menselijk
- person
- psychologie
- theorie
- aandacht
- betekeniss
- biologie
- cultureel
- dergelijk
- erfelijk
- feit
- invloed
- manier
- natur
- omgev
- onderzoek
- ontwikkel
- plant
- positiev
- psycholog
- social
- sterk
- verschill
- vollid



# CONSPECT.

View Type: My Graphs | Search Option: Tag | Keyword:  | Go

Name	delete	public	combine
student2 - group concept dated 29.11.10 13:56	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
student1 - group concept dated 29.11.10 13:54	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
student1-student2 concept dated 29.11.10 13:52	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Evolutionary Psychology - student 1 covers 22.11.10 13:54 to 22.11.10 13:54	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Evolutionary Psychology- student 2 covers 22.11.10 13:54 to 22.11.10 13:54	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Evolutionary Psychology - group model covers 01.11.10 13:13 to 01.11.10 13:13	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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student 2 covers 22.11.10 13:54 to 22.11.10 13:54	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
student 1 covers 22.11.10 13:54 to 22.11.10 13:54	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Create

feeds concepts

## Evolutionaire psychologie

Monday, 1 November 2010

### Mijn uitzicht over Evolutionaire Psychologie

orie van Darwin: natuurlijke selectie en deze is afhankelijk van twee componenten: de lijke variatie en het differentieel reproductieproces. Als gevolg van het laatste hebben rmege individuen, door deze verschillen meer overlevingskans dan anderen. Bij de erfelijke sie verschillen individuen binnen een populatie doordat bepaalde kenmerken zijn rgegeven.

Iere wetenschappers uit de biologie: Mendel: erfelijkheid is opgebouwd uit deeltjes. Zijn k werd pas in de 20e eeuw herontdekt. De samensmelting van de genetica en de lutionaire theorie, leidde tot de moderne synthese. Wilson: de sociobiologie: de ematische studie van de biologische basis van alle sociaal gedrag. Hij meende dat zulrijke selectie in bepaalde mate, menselijke gedrag hebben gevormd. Zijn aanpak werd ieuwse synthese genoemd.

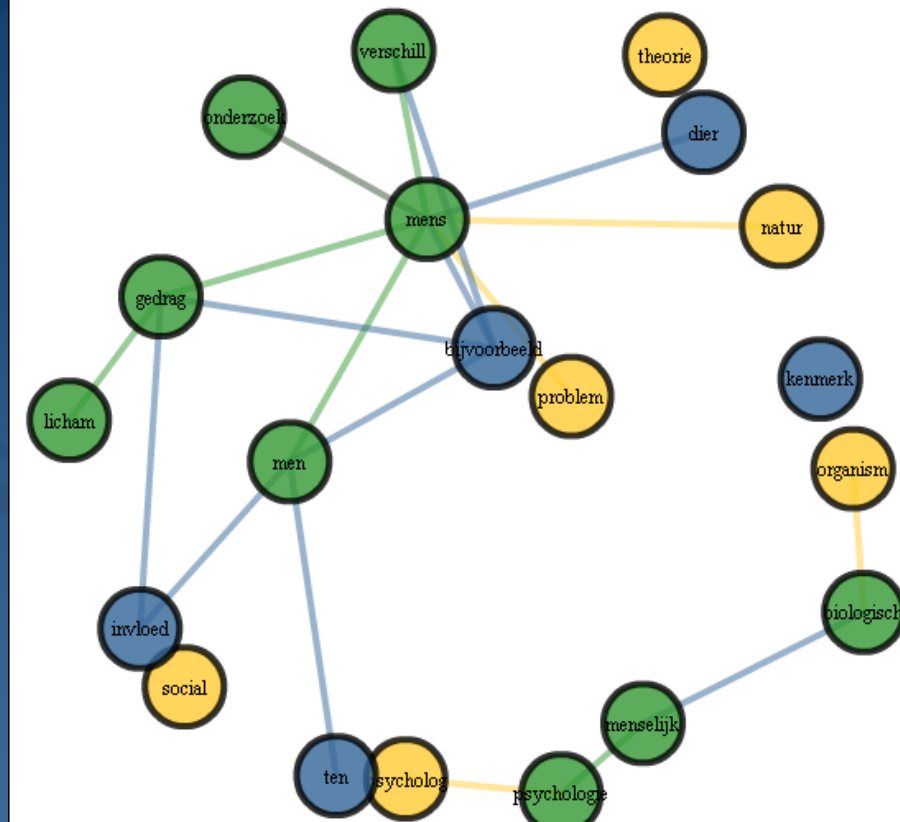
istukken uit de psychologie: Galton: karakter en intelligentie zijn erfelijke trekken. Hij le menselijke soorten verbeteren. James: zag instincten als voornaamste bepalers van seeljk gedrag. Freud: zag het ID als een vat aangeboeren verlangens, inclusief de uele noodzaak.

evolutionair denken is sinds het begin van de 20e eeuw grotendeels uit de psychologie lvenen. Wetenschappelijke aanleiding: veel verklaringen over adaptatie worden niet loende ondersteund door bewijzen en vaak is he

**GREEN:** the concepts appearing in both blogs

**YELLOW:** the concepts covered only by one blog

**BLUE:** the concepts only appearing in the other blog



overlap

Blue, Yellow: concept is only in one of the joint conceptogrammes  
Green: overlap - concept is in both of the joint conceptogrammes  
Diameter: weight/importance of a concept

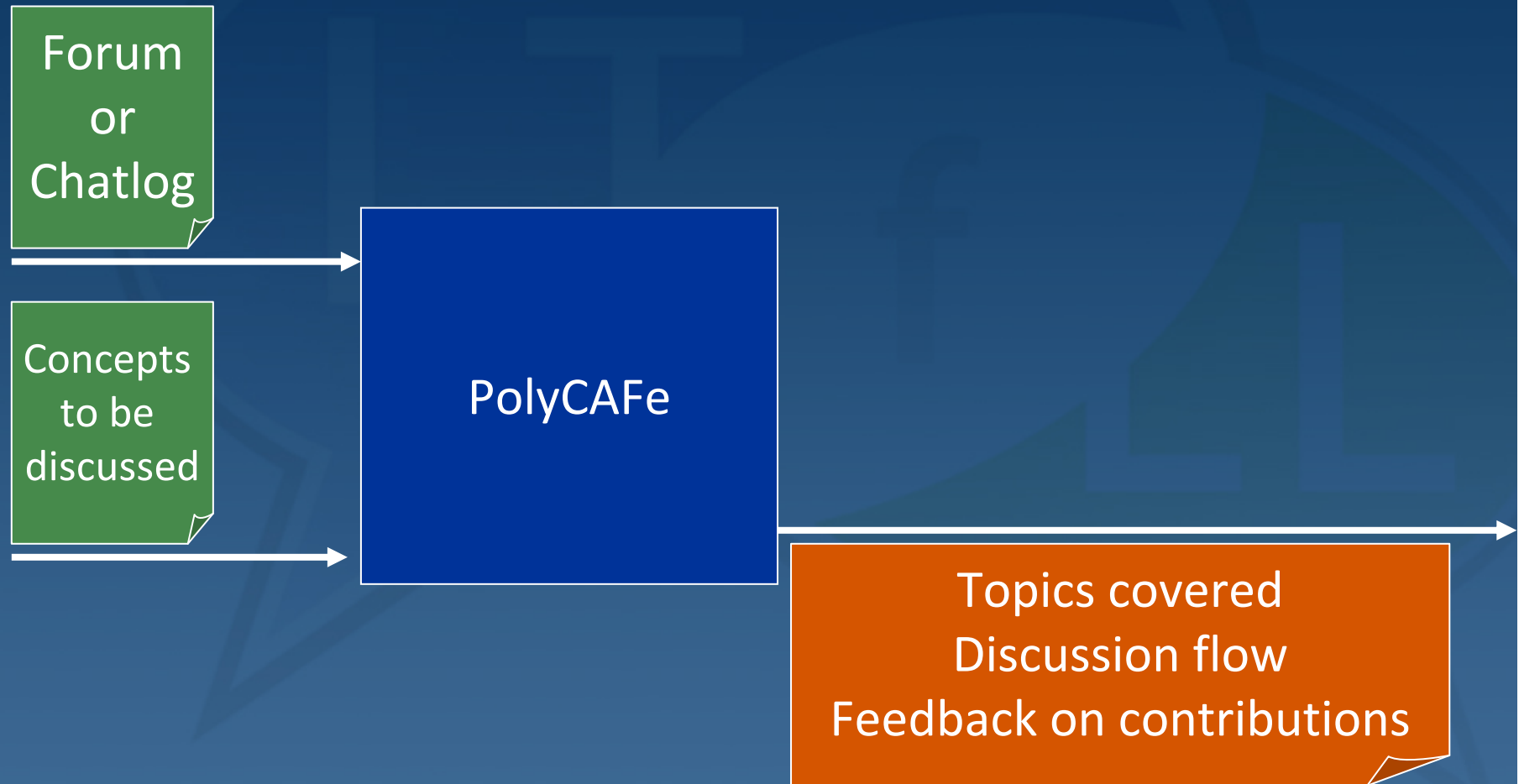
# CONSPECT - Demo

[http://augur.wu.ac.at/conspect\\_3/graphs.php](http://augur.wu.ac.at/conspect_3/graphs.php)

# PolyCAFe

- **Problem:** Online discussions are time demanding to provide feedback and to assess contributions
- **PolyCAFe:** Analyse chats/forums about the collaboration:
  - Coverage of the topics (group, individual)
  - Interactions and participation (visual graph)
  - Feedback (content, utterances, social)

# PolyCAFe



### LTfLL-WP5-ConvserationFeedback



#### Help

Assignments:

Discussion:

#### Information on content:

The concepts that should have be

- chat
- wiki
- forum
- wave
- blog
- collaboration
- company

The most frequent concepts are:

- chat: 43 [chat, confabulate, confat
- forum: 29 [forum, assembly]
- solut: 29 [solution, answer, result,
- yes: 28 []
- project: 23 [undertaking, project, t
- agre: 22 [agree, hold, concur, con
- blog: 21 [blog]
- custom: 21 [customer, client]
- OK: 20 []
- true: 20 [true, truthful, dependable
- time: 19 [time, clip, meter, metre, :
- compani: 17 [company, companio
- employe: 15 [employee]
- answer: 14 [answer, reply, respon
- client: 14 []
- use: 14 [use, utilize, utilise, apply,

## LTfLL

### LTfLL-WP5-ConvserationVisualization



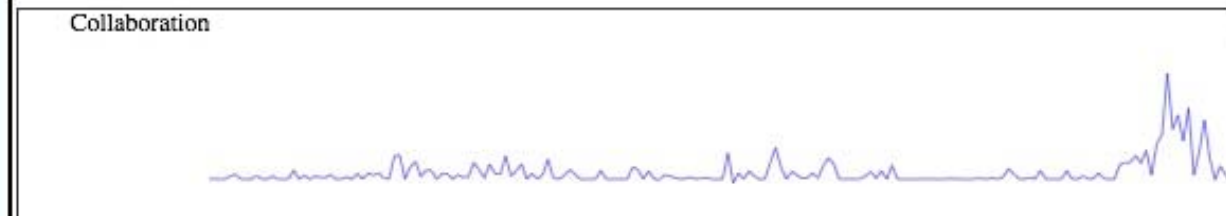
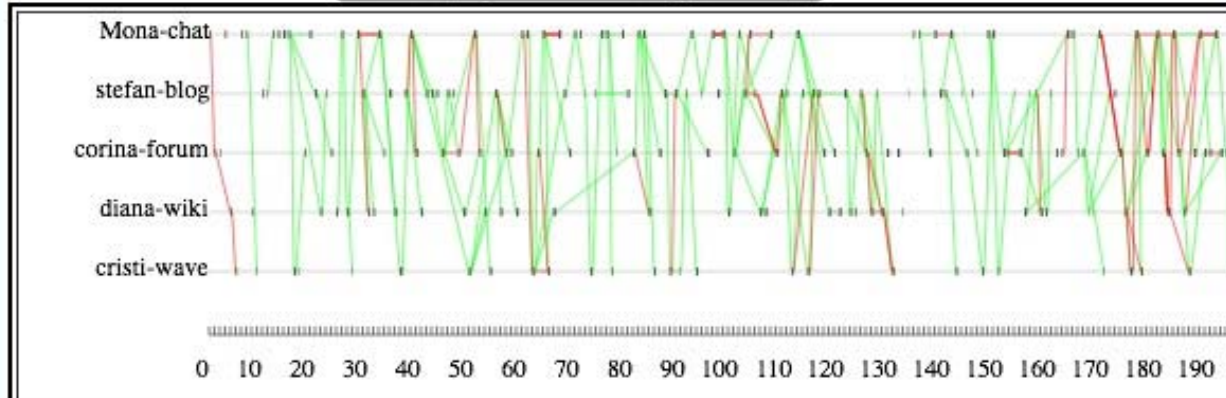
#### Help

Assignments:

Computer Science: Human-Computer Interaction: Validation Round 2 - Chat 2

Discussion:

132. Group1\_chat2.htm -> chat\_132.xml





## LTfLL-WP5-ParticipantsFeedback



### Help

Assignments: Computer Science: Human-Computer Interaction: Validation Round 2 - Chat 2

Discussion: 132. Group1\_chat2.htm -> chat\_132.xml

Participant: Mona-chat

Your ranking based on content is: VERY GOOD

Your ranking in the conversation graph is: GOOD

Have you been a key (central) participant to the conversation? GOOD

Your utterance structure is: VERY GOOD

Your participation based on utterances is: VERY GOOD

Your participation based on words is: VERY GOOD

Your utterances have been useful for others: VERY GOOD

Your have continued other utterances: VERY GOOD

Your spelling is: AVERAGE

Your fluency is: VERY GOOD

## LTfLL-WP5-UtteranceFeedback

### Help

Assignments: Computer Science: Human-Computer Interaction: Validation Round 2 - Chat 2

Discussion: 132. Group1\_chat2.htm -> chat\_132.xml

Participant: Mona-chat

Show only summary: Yes

ID	Utterance	Participant	Speech act	Inquiry class	...
16	What kind of company are we?	Mona-chat	•Continuation •Info Request •Statement	•Social Group Collaboration	
17	we are supposed to be in company , right ?	crisi-wave	•Accept •Agreement •Continuation •Statement	•Social Group Collaboration	
21	We have to implement a communication solution	stefan-blog	•Continuation •Statement	•Social Group Collaboration	
29	Let's think od some activities... and then decide which technology is better	Mona-chat	•Action Directive •Continuation •Statement	•Tutor Direct Instruction	•Cl •Qu
30	As we previously disccoused i think a combination of them should be perfect	stefan-blog	•Continuation •Info Request - Declarative Question •Statement	•Social Emotional Expression •Social Group Collaboration	
33	Of course... we will be using all of the 5 technologies.... but first	Mona-chat	•Continuation	•Social Group	•Cl •Cc

# PolyCAFe - Demo

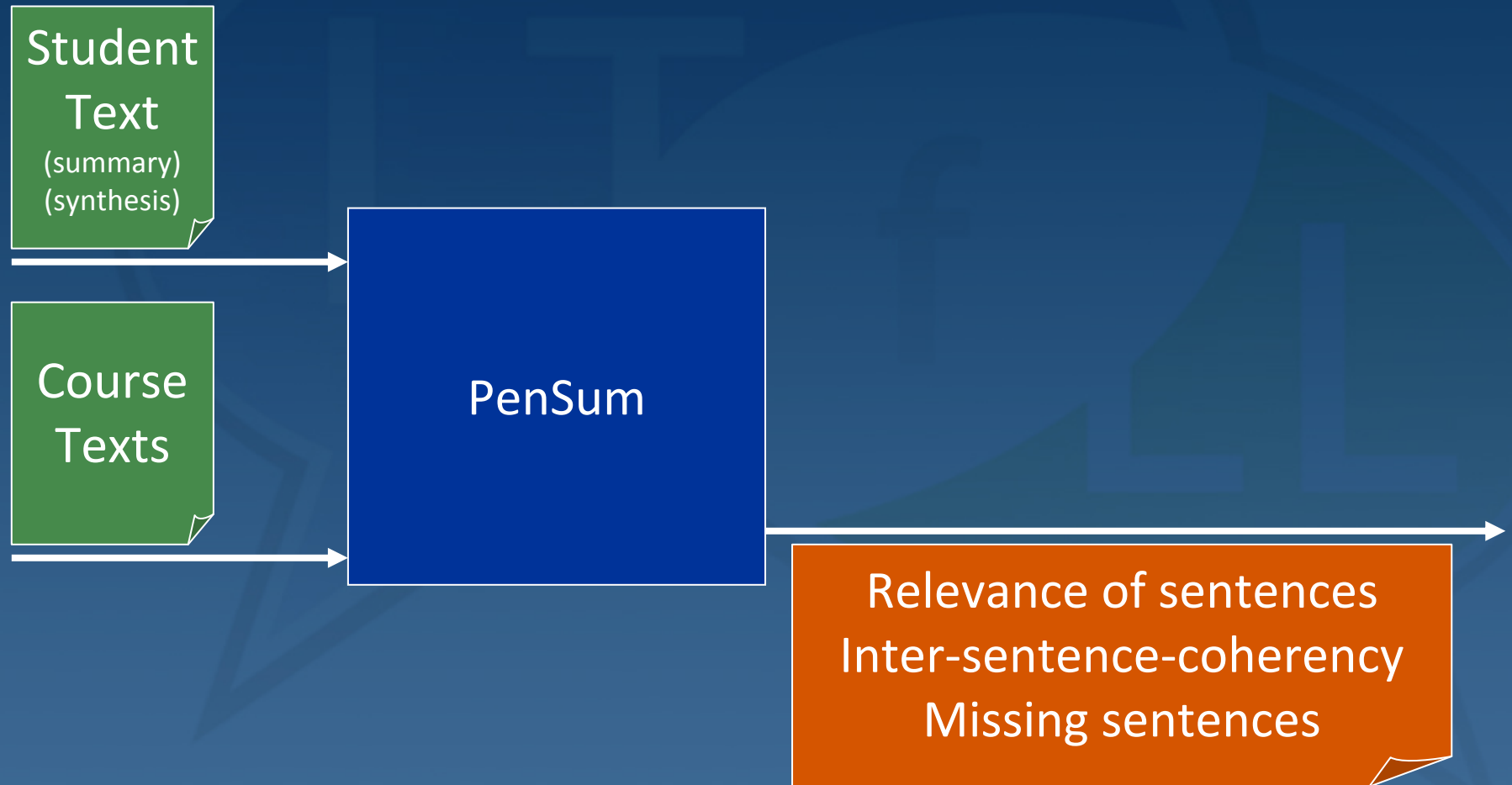
<http://augur.wu.ac.at/elgg/>

# PenSum

- **Problem:** feedback on essays is time consuming: feedback only to final texts and lately recognised misunderstandings.
- **PenSum:** automatic assess of (draft) essays, analyse understanding of course texts:
  - relevance of written sentences,
  - inter-sentence coherence,
  - missing of relevant course sentences.



# PenSum



# PenSum

Lisez attentivement les cours puis synthétisez-les ci-dessous.

Vous pouvez à tout moment demander un feedback au système pour vous aider dans votre

travail.

STUDY CASE

\*Cours 2 : Qu'est-ce que naviguer ?

## 1. Origine du concept

Du point de vue de l'apprenant, la possibilité d'interagir avec un hypermédia ressemble à une sélection de liens lui permettant de passer par un simple clic sur un mot lien ou une image lien d'un écran à un autre. D'où vient le choix du terme naviguer pour représenter cette activité ?

"L'idée de navigation appliquée à la connaissance était déjà présente chez Francis Bacon (1561-1626) qui va introduire, avec la métaphore de "l'océan de la connaissance", et par là, de la navigation, une véritable réforme de la pensée encyclopédique. A l'inventaire du savoir déjà constitué, il intègre l'esquisse de son devenir, de ce qui est encore en friche. Pour lui, la connaissance, c'est d'abord la puissance qu'a l'homme de connaître, c'est une invitation à prendre le large ; ce qui lui importe, ce n'est pas d'abord l'inventaire du savoir, c'est la marche, le mouvement de la connaissance (Chatelain, 1996). C'est cette même idée d'ouverture, de l'action de l'utilisateur comme constructeur de ses propres connaissances, que l'on va retrouver dans la substitution de "navigation" à "lecture" pour désigner l'exploration de l'information électronique."

Zeilinger et al. (1999)

## SYNTHÈSE

Mode écriture

Mode feedback

- Tolérance du feedback +

Lancer le feedback

L usage des supports hypermédia dans la formation est aujourd'hui en pleine expansion. Cette expansion invite les pédagogues et les informaticiens à réfléchir sur la conception de tels supports. Nous proposons, au travers de cet article une méthode de conception fondée d'une part sur les propriétés originales du support et d'autre part sur l'exploitation de ce support dans un cadre de formation. Notre approche est basée sur un modèle de représentation de l'information (les Unités Logiques) et sur une logique de conception permettant effectivement de représenter l'information sous une telle forme. Nous présentons également une expérience qui nous a permis de mettre en oeuvre et de commencer à évaluer nos travaux

# PenSum - Demo

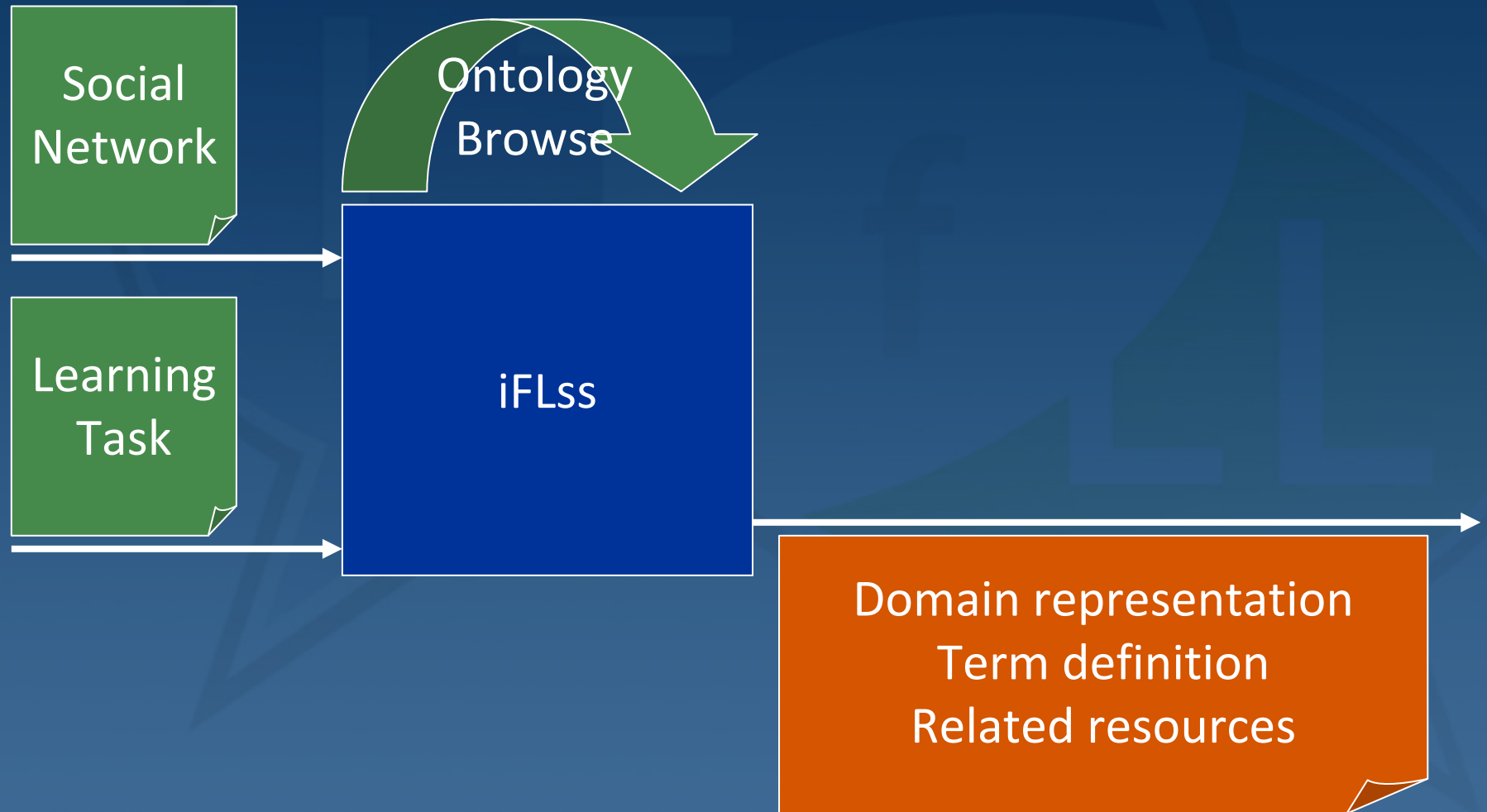
[http://augur.wu.ac.at/summary-writing/Pensum\\_New/](http://augur.wu.ac.at/summary-writing/Pensum_New/)

*Hypermédias, Environnements, WEB 2.0 et apprentissages*

# iFLss

- **Problem:** How to locate Web content appropriate for intended learning tasks
- **iFLss:** Search facilities that recommend material based on content, tags and own social network
  - Ontology browsing (discover new or related concepts)
  - Recommend from: YouTube, delicious, Slideshare
  - Definition of terms, related documents

# iFLss



**Wookie** EDIT -

**Search**

Help

website Search..

**Wookie** EDIT -

**Definition**

Help

**site**

A website (or "web site") is a collection of related web pages, images, videos or other digital assets that are hosted on one web server, usually accessible via the Internet. A web page is a document, typically written in HTML, that is almost always accessible via HTTP, or less often HTTPS, a protocol that transfers information from the web server to display in the user's web browser.

Edit page

**Wookie** EDIT -

**Social Bookmarks**

Help

- Viewbook - jQuery Plugin
- Dive Into HTML5
- Keep Margins Out of Link Lists | CSS-Tricks
- Check/toggle 'em all / Stoyan's phpied.com
- Google: HTML, CSS, and Javascript from the Ground Up - Google Code University - Google Code
- HTML5 and Even Fancier Forms
- #58: HTML & CSS - The VERY Basics
- W3Schools Online Web Tutorials

**Wookie** EDIT -

**Graph Visualization**

Help

**Wookie** EDIT -

**Social Videos**

Help

- BooneOakley.com - Home Page
- Basic HTML and CSS Tutorial. Howto make website from scratch
- How to Make a Website in Four Minutes
- HTML Tutorial 1 - Designing A Website In Notepad - Basics and Beginnings
- How To Make/Design A Website For Free \*For Beginners\* \*Long 30 minutes!!!\*
- How To Make Your Own Website For Free!
- The Website Is Down - Sales Guy vs. Web Dude

**Wookie** EDIT -

**Social Slides**

Help

- Help I Need A Website!
- Website Redesign Tips
- My free website builder™
- 10 tips for a usable website

# iFLss - Demo

<http://augur.wu.ac.at/elgg/>

# Combination of services

## Assumptions

### Combining:

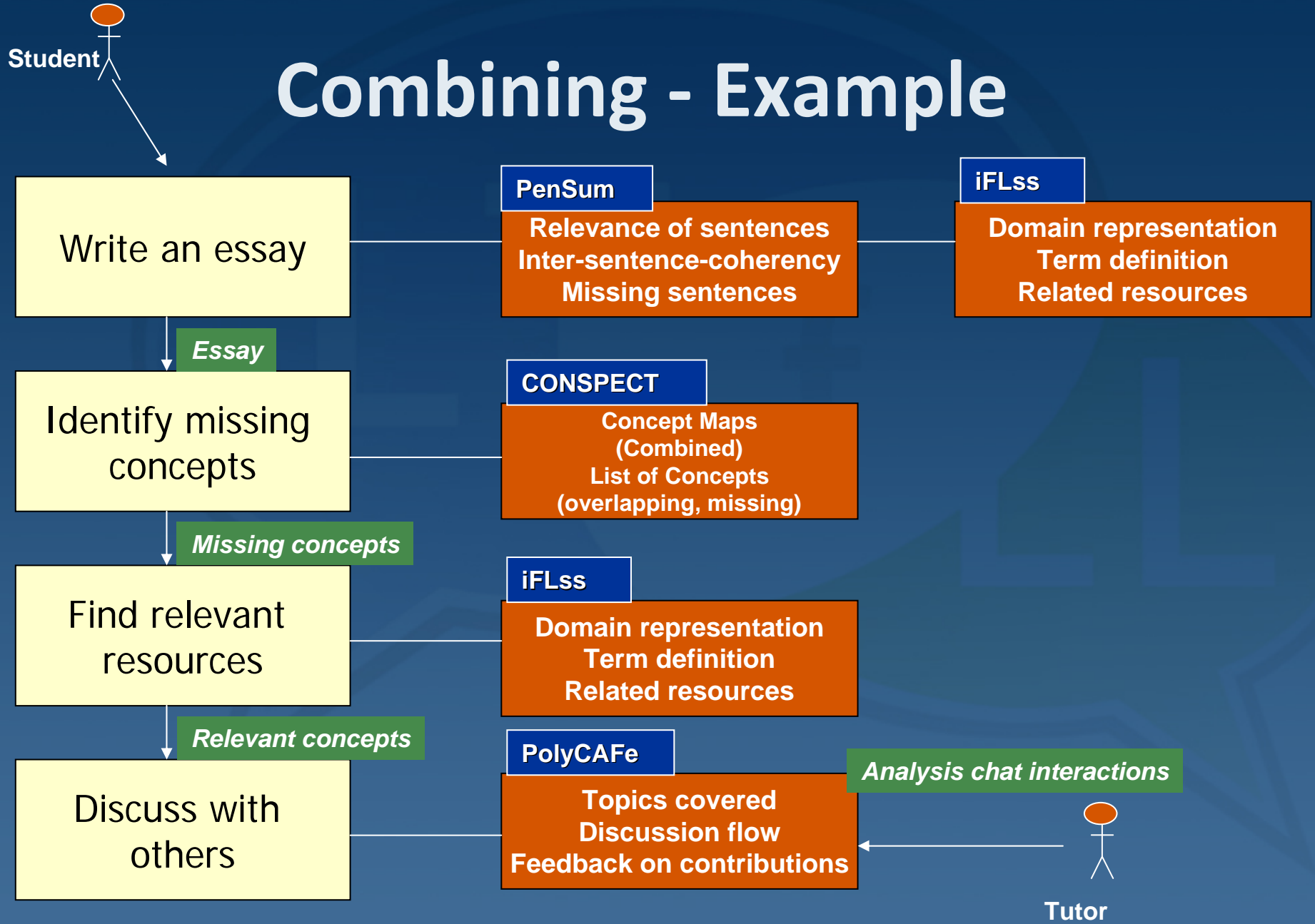
- provides added educational value
- suits better to more complicated tasks
- can be done in numerous ways



# Combination of services- Example

- Learner task:
  - Write a summary
  - Find missing concepts in your summary
  - Find additional resources for missing concepts
  - Discuss in a group the key concepts (identified by the tutor)
- Tutor task:
  - Analyse the collaboration

# Combining - Example



# CONSPECT.

Concepts for KMi - 05.11.10 12:

<< back



[complex+](#)  
[comput+](#)  
[cooper+](#)  
[level+](#)  
[peopl+](#)  
[perspect+](#)  
[various+](#)  
[account+](#)  
[acm+](#)  
[annual+](#)  
[benefit+](#)  
[blog+](#)  
[close+](#)  
[commiss+](#)  
[common+](#)  
[cscw+](#)  
[deliv+](#)  
[depart+](#)  
[didact+](#)  
[enhanc+](#)  
[excel+](#)  
[experiment+](#)  
[foundat+](#)  
[futur+](#)

## Search

Help



## Social Slides

Help

- [Being Online, Living Offline: The Influence of Social Ties over the Appropriation of Social Network Sites](#)
- [CSCW 2008 Closing Plenary](#)
- [Global Ubiquitous Computing -- or why CSCW and UbiComp are not the same...](#)
- [CSCW 08 Keynote](#)
- [CSCW 2008 Opening Plenary](#)
- [Leadership in Online Creative Collaboration - CSCW 2008](#)
- [MusicFX: An Arbiter of Group Preferences for Computer Supported Collaborative](#)

## Scientific Papers

Help

**BibSonomy ::**

- [CSCW: time passed, tempest, and time past.](#)
- [What can Studies of e-Learning Teach us about Collaboration in e-Research? Some Findings from Digital Library Studies](#)
- [Enriching the Notion of Data Curation in E-Science: Data Managing and Information Infrastructuring in the Long Term Ecological Research \(LTER\) Network](#)
- [tagging, communities, vocabulary, evolution](#)
- [Workshipping - The Integration of Multiple](#)

## Social Bookmarks

Help

- [ECSCW Proceedings Main](#)
- [CSCWglobalwork](#)
- [Perspectives on CSCW](#)
- [Interaction Design Centre -The Library - Liam Bannon's Articles](#)
- [The Context of CSCW](#)
- [pequeños recursos](#)
- [CSCW: Its History and Participation](#)
- [Proceedings of the 2006 20th anniversary conference on Computer supported cooperative work](#)
- [Proceedings of the 2008 ACM conference](#)

# Feedback Long Thread

1. Give feedback on
  1. Benefits
  2. Weaknesses
  3. Obstacles
2. Answer a questionnaire

# Final remarks

- Comments?
- Questions?
- ...

**Thank you!**

<http://www.ltfll-project.org/>