

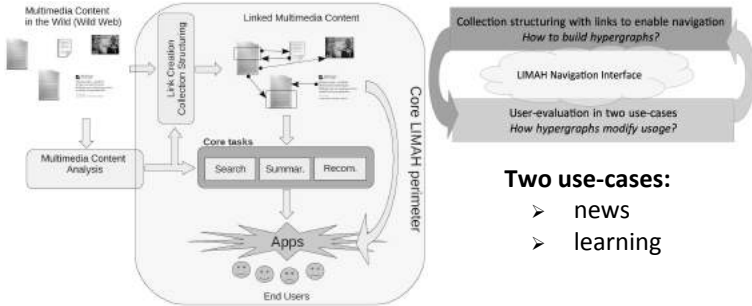


Linking Media in Acceptable Hypergraphs

Linkmedia, IRISA, CNRS
TALN, LINA, CNRS
CRPCC, Univ. Rennes 2
PREFics, Univ. Rennes 2
IODE, Telecom Bretagne



Overall description



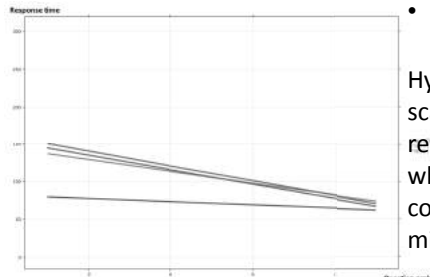
A study on the effect of video segmentation

- effects of scaffolding level on information search in videos
- 4 conditions:
 - no scaffolding (video only)
 - micro-scaffolding (i.e., markers in the timeline)
 - macro-scaffolding (i.e., table of contents)
 - joint use of micro and macro



- specific and positive effects on navigation and semantic search of each level
- search facilitated by the combination

Hypothesis (under test): scaffolding provides user with a ready-to-use conceptual model, while a mental model must be constructed when scaffolding is missing (but costly)



Cojean, S., & Jamet, E. (2016) Facilitating the information seeking activity in instructional video: the effects of micro- and macro-scaffolding. Meeting of EARL SIG 6&7 "Instructional Design" and "Learning and Instruction with Computers", Dijon, France.

A study of legal issues in hyperlinking

The legal context

Initially based on libertarian logic, hyperlinking is now largely confronted with a privatized and market logic, accentuated by techno-economic innovations like search engines and news aggregators. This creates legal concerns on various fields such as intellectual property or responsibility related to content, which could lead European law to constrain the creation of hyperlinks.

A relative freedom to link with regard to content

No major constraints are imposed on the use and on the publication of content through hyperlinking. This is largely seen as neutral by European law. But the situation is still unclear due to the lack of consistency in the current legal regime for hyperlinking regarding IP law and responsibility.

The legal questioning

The study intends to determine to what extent European Union rules favor the free creation of hyperlinks, or the third parties' interest and constraints on hyperlinks. Through this questioning, the study is also in search of a clear legal regime for hyperlinking in European Union law.

An emerging control on automatically created hyperlinks regarding third party and users

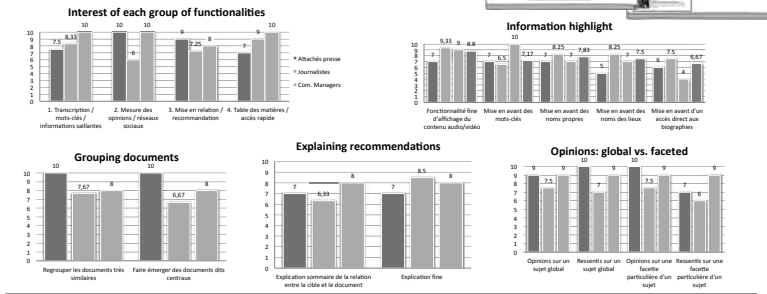
This freedom to link leads to question the role of certain hyperlink creators as gatekeepers of information. This control is currently limited but could possibly be reinforced through the set up of a specific regulation.

- Relative freedom to create links due to the neutral role of hyperlinking regarding content protection and publication
- Emerging control of hyperlinking regarding third party and users corresponds to a necessary non neutral approach by the law
- Hyperlinking as being part of a new category of media in need of specific regulation

A study of news user expectations

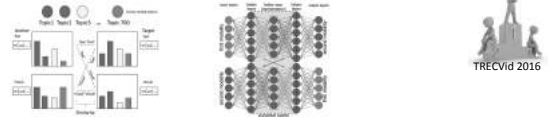
Methodology: Interviews based on description of functionalities and mockups over ~10 professionals, judging 4 groups of functionalities

[Gravier et al. Shaping-Up Multimedia Analytics: Needs and Expectations of Media Professionals. MMM 2016]



Key technological achievements

Cross-modal linking (not yet integrated)



R. Bois et al. Exploiting multimodality in video hyperlinking to improve target diversity. MMM 2017
R. Bois et al. IRISA at TRECvid2016. TRECvid workshop, 2016

Navigable nearest neighbor graph construction

- a community detection based approach
- automatic detection of a limited number of neighbors
- 90% of docs within one connected component
- purity = 0.70 for radio/TV, 0.83 for texts



Target identification in opinion mining

- ✓ Opinion Target Extraction and Sentiment Polarity Detection
- ✗ Cross-domain transfer of the resources and models from reviews on hotel/restaurant to news stories

Le plat de pâtes était excellent! @tripadvisor → Les électeurs de Siriza remettent tous leurs espoirs dans Alexis Tsipras, le nouvel homme fort du pays. 2

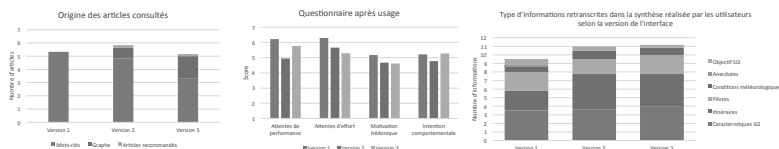
G. Jadi et al. Opinion target expression extraction: from English to French. Conf. Traitement Automatique des Langues Naturelles, 2016.

Prototype and usage testing

Three versions of the interface...



... already tested by 23 students (infocom, journalism)



More to come soon!