Displaying Asynchronous Reactions to a Document: Two Goals and a Design

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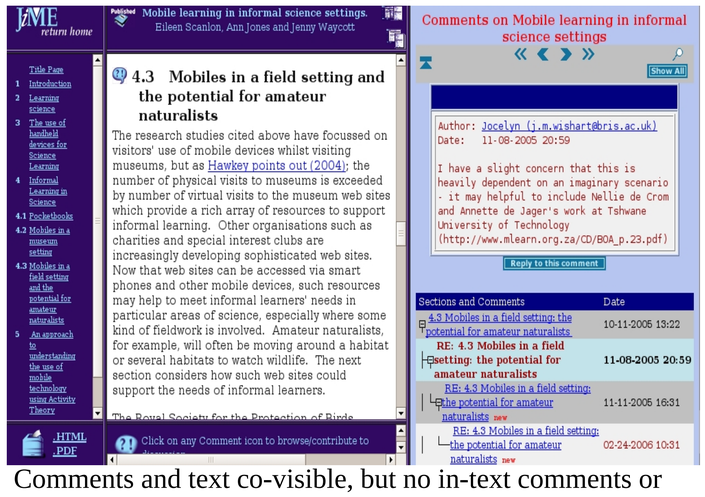
Interface Goals

- **Visible relationshps.** Relationships between comments and the texts they reference, between different comments, and between group members and the document and discussion, should be as visible as possible.
- **Distinguishable boundaries.** Separations between contextually related and unrelated text and comments and between individual authors of documents and comments should be as distinguishable as possible.

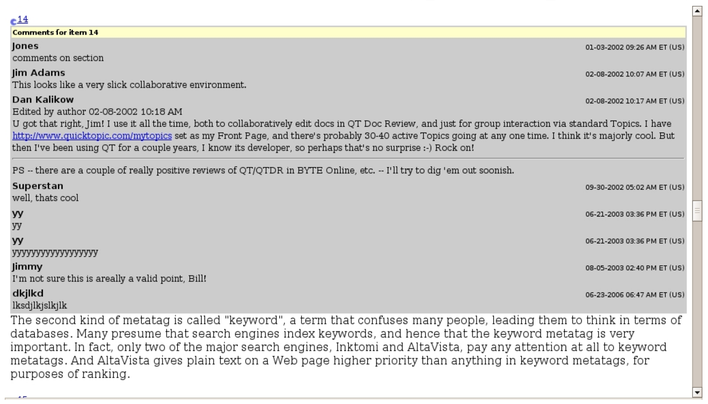
5 Document-Centered Discussion Systems

1) D3E (d3e.sourceforge.net)



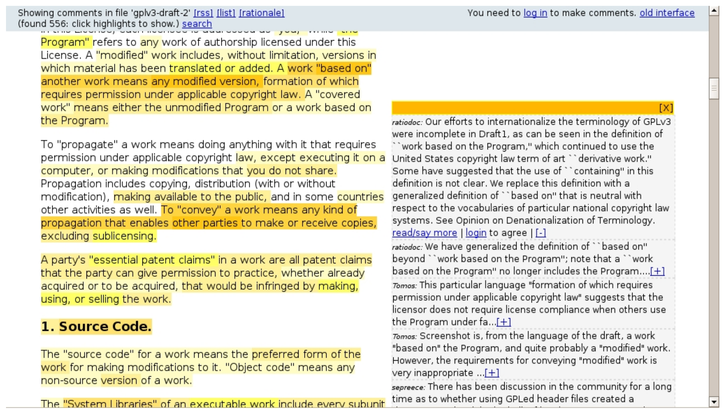
Comments and text co-visible, but no in-text comments or pointing; comment boundaries distinguishable, but target text boundaries not marked

2) Quick Doc Review (quicktopic.com)



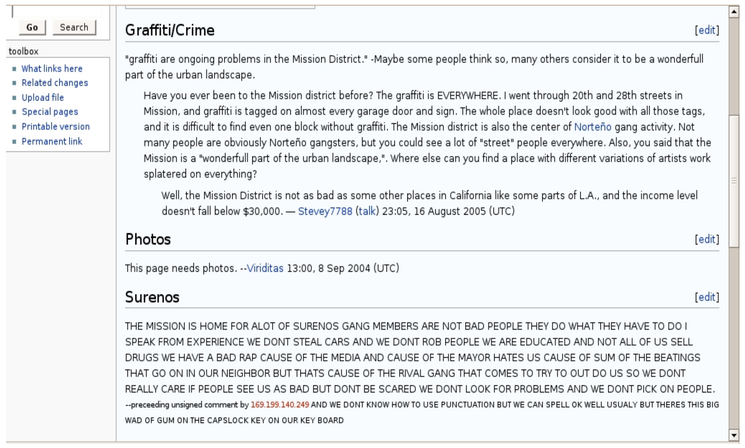
Co-visibility of in-text comments and relevant document passage depends on vertical screen space; target text boundaries marked with white space

3) Stet (gplv3.fsf.org/comments)



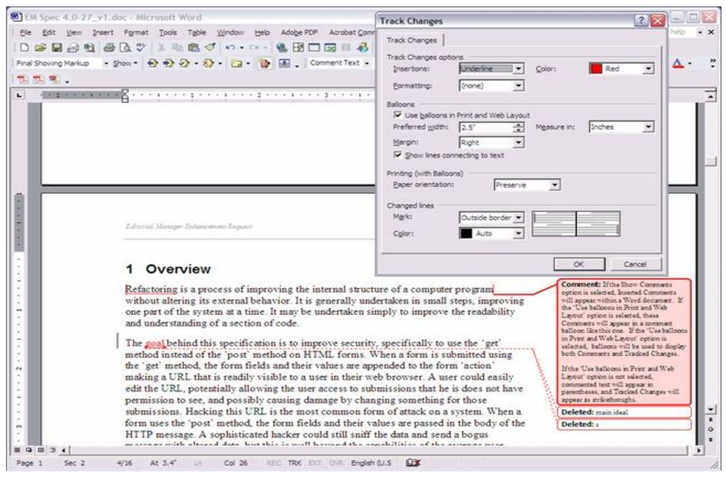
In-text comments co-visibile (after region selected) but text-comment relationship ambiguous; target text region bounded by colors

4) MediaWiki (mediawiki.org)



Target text and comments not co-visible – relationship accessible only via tabbing; comment boundaries depend on users' editing skills

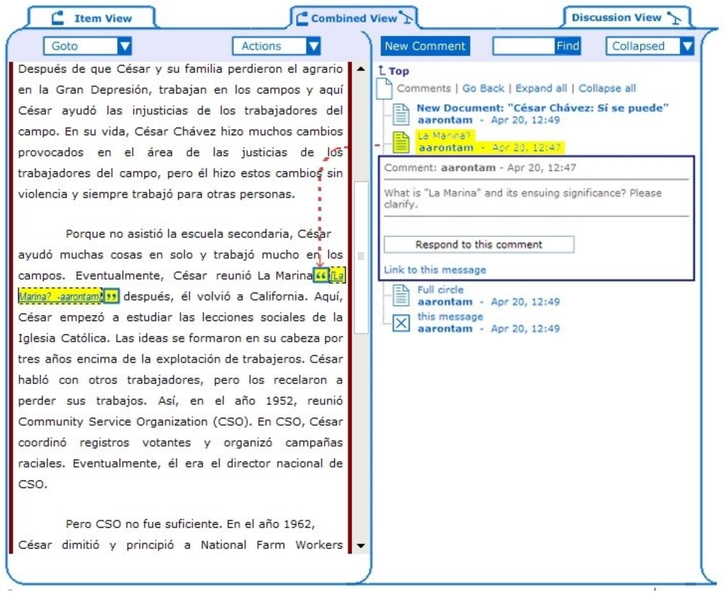
5) Microsoft Word (office.microsoft.com)



Co-visibility and comment boundaries; text-comment relationship indicated with pointing, but relationships between comments (thread structure) not visible

The *Deme* Approach

The Deme environment for online deliberation is a tool for document-centered discussion, polling and decision making that incorporates all of the elements derived above from the goals of relational visibility and boundary distinguishability in a new "AJAX" interface, under development.



The figure above shows the most recent design of the *meeting area* viewer in Deme. The shaded-in header of a comment in the discussion view pane on the right points to a shaded-in comment reference in the text of a document shown in the item view pane on the left. Deme provides co-visibility between document and comments through an optional split-screen view. In-text comment references are transiently pointed to (the dotted-line arrow goes away as soon as the user scrolls) when clicked on, and comments are displayed in the context of hierarchical threads. Members can vote on documents under a variety of decision rules. Boundaries are provided through highlighting, text boundaries, headers, and a versioning system that remembers when comments become obsolete and marks them as such. The design takes advantage of no-page-reload web server calls to provide dynamic relationship visibility and boundary distinguishability.