Technical Definition of Google Docs

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Online word processors like Google Docs offer collaborative features that standard word processors cannot. Google Docs is part of G Suite, a cloud based storage service that can be used to access Google's suite of collaborative productivity software. The G Suite includes word processor, Google Docs; their spreadsheet software, Sheets; and presentation software, Slides. All of Google's productivity software features on and offline usability, instant saving of progress (while online), real time editing between team members, real-time commenting and annotations, integrated chat, and integration between Google's communication software such as Gmail and Hangouts (Google, 2014). For the remainder of this definition the focus will be on the word processor, Google Docs, and how it can help technical communicators.

How Google Docs compares to other word processors

As a word processor, Google Docs functions much like similar software such as Microsoft's Word, or Corel's WordPerfect. It is a limited feature 'What You See Is What You Get' (WYSIWYG) software, meaning printed output will be as it appears on screen. It allows for general text editing, font formatting, type justification, styles, and other standard word processing tools. While not as robust in features as Word or WordPerfect, Docs makes up for lack of features with elegant usability. Where Word has several tabs for options to sort through, all of the most commonly used functions are readily available at the top of Doc's menu bar.

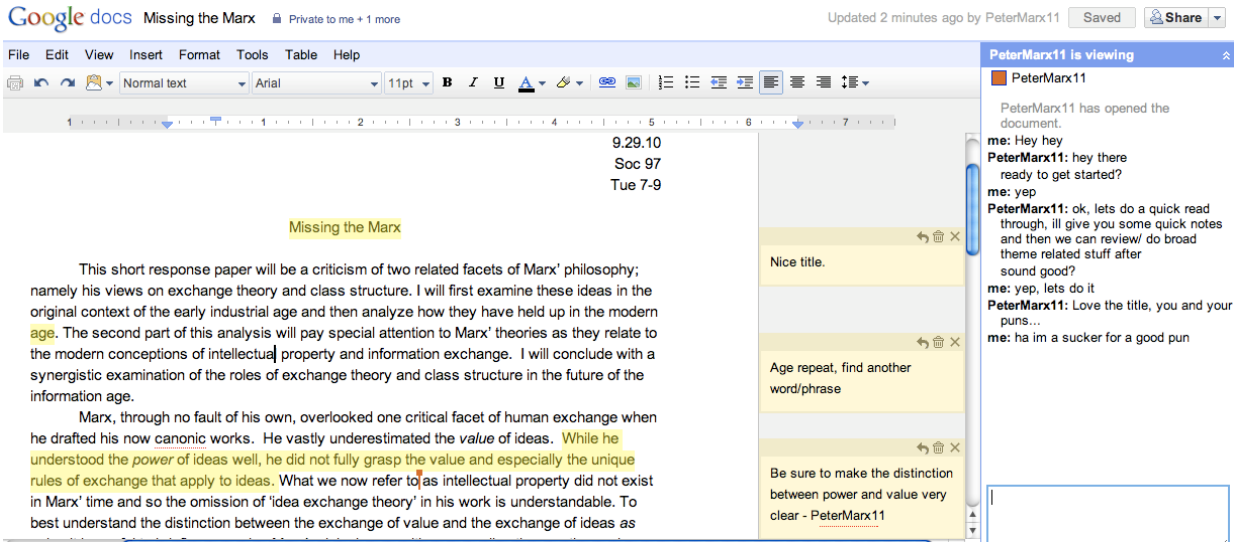
One feature that is noticeably absent on Google Docs is a "save" feature. Google Docs automatically saves document as they are written. The auto-save feature eliminates needing to periodically save, as well as worrying about possible data loss. A feature that ties nicely to the auto save is the Revision History tool. With it, users can see changes made to the document, as well as who made them.

Google Docs as a collaborative tool

Google Docs has many features that make it stand out as a collaborative tool when compared to other word processors. Users can easily share, edit, and comment on documents in real time. To share a document, a user clicks the "Share" button in the upper left of the window, which opens a dialog box for the user to enter an email address of the person they want to share with. The "Share" dialog box is also where you can set accessibility levels; edit, comment, or view only.

Once a user is given edit access, the ability to make changes to the document in real time, simultaneously with other users. The user edits will show up on the screen with a color coded cursor next to their name. If a user is granted comment access, they have the ability to suggest edits which show up as comments. Additionally, if a "+" and a user's email address are added to a comment, that user will receive an email notification. Users with no editing privileges should be given view only access.

The following image shows several of the collaborative tools within Google Docs being used for editing. First, in the main window (left) we notice there are highlighted words that correspond to comments, which we see in the in the comment window (middle). To the far right of the image, the interactive chat window shows the two users currently viewing the document, a listing of the users in the chat, and below that is their conversation.



Google Docs page showing the main document window with text (left), the annotation/comment window(middle), and interactive chat window (right). Image credit: https://students.googleblog.com/2010/10/online-office-hours-with-google-docs.html

Using Google Docs from anywhere

Although Google Docs is a browser-based software, Google Docs can be used offline if there is no internet present. Once online connectivity has been restored, Google Docs saves the changes or comments made to the document.

Google Docs can also be used as a mobile application. The application is available for both Android and iOS devices. While even more limited in features than the browser based version of Docs, the mobile application still allows for access, commenting, and editing of shared documents.

How Google Docs helps technical communicators

Writing in teams can be difficult. In an effort to streamline the creative process, Technical Communicators need to be able to be in contact with other writers on their team, editors, and subject matter experts. According to technical communications researcher Jessica Behles (2013), Google Docs is the second most commonly used tool by practitioners, who use it primarily for its collaborative editing features (pg. 35). Previously, a document may need to be forwarded to each individual party, creating opportunities for a loss in version control. Using the collaborative editing tools that Google Docs provides, professional communicators can share the documents with relative ease, and there's no chance for multiple copies of the document to cause confusion. During a review phase, the author can get real time feedback from the subject matter experts, getting clarification or additional information that may have been left out. Similarly, the technical editor can suggest revisions to style, or ordering of

the document at any point in the creation process. The browser based word processor, and the mobile app can be used by these professionals as they are on the go. Google Docs allows users to create, share, review, and revise from virtually anywhere, which separates Google Docs from other word processors, turning it into a productivity solution.

Technical Description of Online Collaborative Writing Tools

Marc Baker

Online collaborative writing tools (OCWTs) are a type of software designed to streamline the creative process of writing among many authors or editors thus saving them both time and money. While different tools offer different features, the most commonly seen features are ease of sharing files and shared authorship capabilities. Some examples of OCWTs are wikis, online word processors like Google Docs, and document management systems like NetDocuments.

As the world of technology has changed, so too changed the way technical communicators work. One of the more notable ways this is seen is in the rise of OCWT use. According to research by Behles (2013) in *Technical Communication*, 57% of of professional technical communicators are using OCWTs daily, and 100% had used some kind of OCWT at least once (p. 33). With this rise, educators in technical communication fields have begun to incorporate these tools into their curriculum in the hope of preparing their students for real-world applications.

Origins

Collaboration has been a part of technical communication since its beginnings. Sharing documents for review meant a physical copy would be sent to the editor, subject matter expert, or other reader for review. However, once we reached the age of Internet, asynchronous writing tools were created and turn based collaboration became possible. Originally known as “groupware”, collaborative software allowed project teams to work together using document management systems and remote access to files. As more features were required, and better software was developed, specific tools for writing collaboration were created.

The first collaborative writing tools were essentially document managers. These are software tools to allowed users to “check out” documents to be edited, preventing users from writing over one another or creating several instances of the same document. While still in use, these tools have largely given way to synchronous tools like Google Docs, which combine the control of documents while also allowing real-time collaboration.

Benefits

Saving time is the main benefit for technical communicators using OCWTs. This comes in myriad ways. First, there’s no longer a need to save documents and forward them to individual parties. With OCWTs, technical communicator can choose to share a document from its creation, and allow editors or subject matter experts access to comment upon at their will. This ability to share reduces the time between revisions, and leads nicely to the second benefit: version control.

Before the advent of document management systems, the creator of a document would need to carefully manage each revision of a work as it was forwarded between team members. Keeping track of which version was the most current became problematic. As OCWTs are generally cloud or intranet based, there is only "one" version of the work, and users are not required to send copies back and forth for each edit. There are different means of achieving version control, by asynchronous or synchronous means. In an asynchronous system, documents are checked out of a repository, and are "locked" for other users until they are checked back in. Whereas in synchronous systems, the document can be accessed by several users at once, tools like change history and edit suggestion modes keep users from writing over one another. The benefit of synchronous systems is that potential changes to documents cannot be lost if multiple copies have been sent for review at the same time, or to different users. Instead, with a synchronous OCWT like Google Docs, for example, technical communicators would receive the edit comments, or possible additions from other authors in their original document via the edit suggestions feature.

Parts

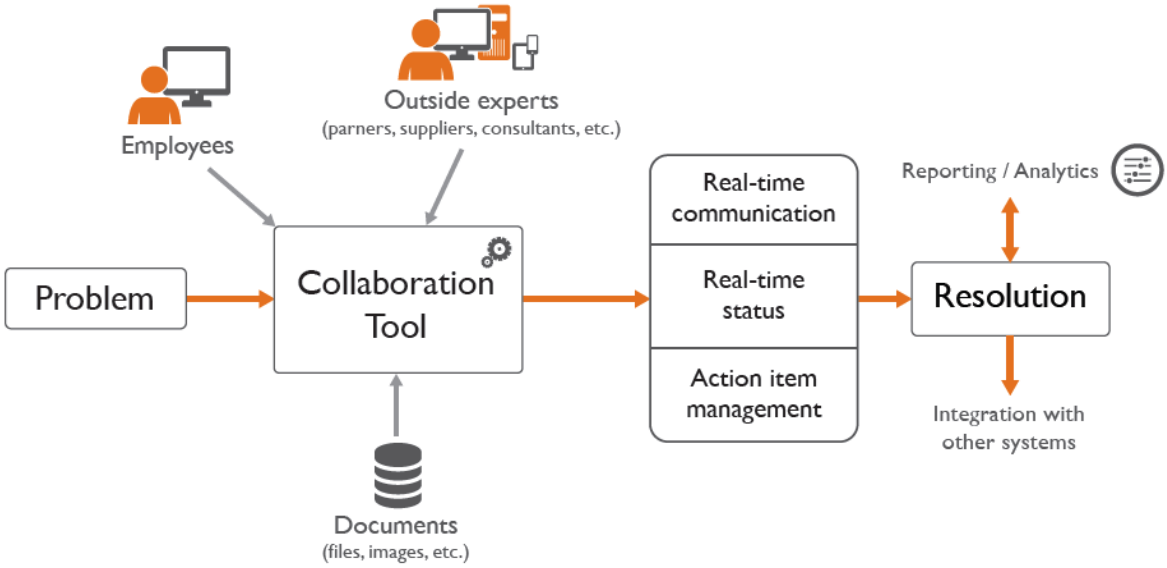
As a class, most OCWTs offer similar features, however since there are several tools, not all OCWTs do the same things. Generally speaking, OCWTs allow for version control, sharing, and editing capabilities. Additionally, more robust software tools may also extend their usefulness by allowing for workflow improvements, mobile versions of the application, and communication tools.

The use of OCWTs which have workflow management built into them can increase productivity. Managers of technical communication teams can utilize these types of software to reduce the amount of time spent on projects. As a document moves through the chain from creation to completion, some OCWTs can keep track of time spent on a document or other metrics that can help identify processes that could be improved. Ideally, these process improvements would help save both time for technical communication teams.

As the capabilities of smartphones have increased, more collaborative software designers have created mobile versions of their applications. For example Microsoft's Sharepoint mobile application allows users to see their company's intranet and to view documents. The cloud based Google Docs and NetDocuments mobile applications both allow users to view, edit, or upload documents from a mobile device. This connect-from-anywhere capability helps technical communicators who are on the go, as they're able to both work and share with their team or with clients.

Staying in contact with a collaborative team is vital to the success of a project. OCWTs that feature communication tools can help by streamlining the process. In the past, and editor may have had to edit a document, write a memo regarding the changes, and email the author. Now, with new communication features, this process is much cleaner. To use the previous example, an editor working in Google Docs could make their edits using the commenting feature, which automatically sends edit suggestions to the author of the document, notifying them of the changes to be made. Or, if the author needs to look over a section with a subject matter expert, they could utilize the chat feature in conjunction with the synchronous editing feature to make edits for clarity. Since OCWTs are cloud based, they don't need to

be in physical proximity, these tasks could be performed from anywhere with internet connectivity. A generalized view of how these features all come together is shown in Figure 1.



(Figure 1) Diagram of workflow using a collaborative writing tool. The OCWT is used for document management, communication with the team, status updates for managers of the team, and action item management between editors and SMEs. In this example, we see the workflow reporting for improvements to the system.
Image source: http://blog.kineticdata.com/bpm/virtual-war-rooms-collaborating-to-solve-big-problems-fast/

Conclusion

Behles' research highlights some interesting trends with regards to the future. One of the problems she recognized is that technical communications students seem uninformed as to the importance of day-to-day use of OCWTs. Even though students are often using tools like Wikis or Google Docs for projects, she feels that educators must do a better job of showing their students that these tools are not simply playthings for the classroom, but real world tools they will be expected to understand and use in their future careers (p. 30).

There is some debate as to which tools should be learned for technical writing students. An interesting result of Behles' (2013) study showed that Google Docs was chosen by practicing technical communicators themselves over company endorsed products like Microsoft SharePoint. Using it primarily because of its ease of use and collaborative abilities (p 37). Considering that Google Docs is free to use and can be accessed anywhere with internet access, there seems to be many reasons to incorporate it into the university classroom.

With 100% of the responding professional technical communicators saying they use OCWTs at the least occasionally, these tools appear to be here for good. What is less certain is how these tools will change over time. Sahil Parikh, founder and CEO of the project management software, Brightpod believes the trends that collaborative software designers are seeing is a shift away from attempting to have "all the features", and towards software that is intuitive, convenient, and designed with the user's workflow in mind (Mikogo, p 34). So while it is difficult to see the direction groupware may move,

what is clear from online collaborative writing tools continued and expanded use in the field of technical communication is that this type of software will not be going away anytime in the near future.

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