Reusable 'bits'

Contents

Reusable 'bits' : Lists and Constellations

Another think piece, where the only real point is for a user to give a bullet list a name in a document and have this be added to Visual-Meta on export, so that it becomes available externally, same as headings and glossary etc.

Lines of thought

There are many things I write which I would like to keep and reuse as and when I need them. One is definitions, which can be covered by glossary terms, another is references to books, articles, websites and social media posts, which can be covered by a library and the other is lists, including links from lists and collaborations for lists. As I was working on the document setting out my initial thoughts for augmented environments[a] I added quite a few lists, outlining possibilities for what elements we have to work with. And then hid them in the Appendix and they are not available for the rest of the team to work on. OK, I call them lists but they should not have to be linear, let me use one of my new favourite terms: Constellations.

So, let's consider a basic unit, a list of data types we can potentially use in our augmented environment. I wrote one of those in the last article so I'll put it below for reference. I gave it a very casual heading and that may be useful in the original document, but

Let us consider that in the world I am interested in we can't simply have things in an app and store it that way. We have to design robustness way past our own passing. Let's also keep in mind that if we use stable/frozen documents as a core component (Visual-Meta PDFs). There has been interesting work in this area, including Ted Nelson's 'transclusions' and Apple's 'publish and subscribe'.

If I now select the bullet points below and receive a menu option for this re-usability, what should it say and how should I, or someone I share it with, retrieve it later? Should other's be able to edit it? What happens if I update it and it's already in a PDF?

I suggest we have a version in the PDF/published, a version in the user's system (yes, the application's database, for private use, same as the manuscript document itself) and one posted online, maybe to a Wordpress site. When the document is exported to PDF, it is encoded in an Endnote (or something else), that this is also posted as a unit to a Wordpress page. The user-reader can then manually check if it's updated and the reader software can do the same, maybe adding a visual indicator on the list in the document to suggest the user check. Changing the full display will likely be too messy in PDF.

So here we go, after messing around with it quite a few times. When user does cmd-8 to make a bullet the system asks for a name for that list (user can leave default name which is selected, 'List 1' or type to overwrite). The result is a title shown before the list, as illustrated below, indented, bold and with a colon. User can cmd-click on the heading to change the name and double click to fold (hide all the bullets) and unfold. We may also experiment with this text being in heading font to make it clearer to the user that it is not normal text.

Available Data for AR:

- Book data
- Journal data (though in a limited form apart from Mark's work)
- Financial data (stocks, currencies)
- Weather information
- Historical news
- Twitter feeds
- Our own dialogue in text (rough) and video and audio forms
- Websites and web searches
- Likely anything Siri can provide
- Maths equations and formulas
- Scientific data
- Wikipedia
- Wikipedia sidebars
- Wikidata
- Laws
- Individual health data/performance
- Instant messages (at least in our own world)

And folded in Author (any authoring software) this becomes the same, but the bullet is now solid and ellipsis follows:

• Available Data for AR…

The title of this bullet list and all the bullets will be added to the Visual-Meta on export. This means it will be available to extract/view separately just like all the other elements in Visual-Meta, such as headings, glossary terms and references. This then allows the user in augmented space to 'pull out' any of the lists they want and they can then pin them in 3D space or insert them into any document (cite them), where they will be cited and the list will be pasted. This will allow the resulting document produced later to either show original list, complete, or have a citation stating 'based on' to show it's been modified. Benefits of this is that when documents with this Visual-Meta is in a known environment we can have back-links even for this, to see how lists have changed over time and by whom.

When these pulled out elements are in a space, they are 'owned' by the space in terms of recording their location etc. but they are still tied to the original document in the sense that the pull-out has the full citation information of where it came from. I guess this means that it has to be divorced from the original document since that document can be removed at any time from the space and this list should not also go. Ideally I would like to this of this list as a data snippet with Visual-Meta

Visual-Meta Backlinks

In the way we can have such backlinks for lists, we can have backlinks for citations as well, and they can even include references to exactly where they come from in the document if the user cited a specific section, giving us the possibilities of Ted Nelson lines.

Questions for future items

What about a larger corpus, such as the timeline I have edited and added to the Future of Text? It would be useful to have that available as a thread in a timeline on the history of text, which should be viewable alongside any other threads.

So… Keep it in the document

So what I thought about is that maybe the data should continue to live in the published/shared document but be easy to access? How about I selected that list above and assigned it a heading/title of 'AR Data' and then published this document, with that listed in this document's Visual-Meta. With this document in my 'shelf' I should be able to extract this information, same as the glossary terms, references and headings, and 'drag it' onto the space I want to have it and use it.

What if I could tag these lists as well as give them a name, much like we can for Wordpress posts, and use this? I could then choose to see all the lists (this is a type of data, which is referable without having to explicitly assign it since Author knows the bulleted items is a list) with the tag AR and there see that I want the one called 'AR Data' and use this?

Once this is available to view and work with, I have to decide how it is anchored for me: Is it still anchored by the original document or the new one I am working on, or the physical space, the selection of data or what? In other words, if I move to a different location, is it stuck to me or the document(s)? What happens when my workspace gets messy, how can I hide and reveal it?

These are questions we will have to work with, but I think it's a safe method of keeping the data in the document, but viewable anywhere, rather than putting it in some sort of a database.

Glossary

"academic" someone who reads academic documents, usually associated with an academic institution, but not necessarily.

"ACM" From Wikipedia: "The Association for Computing Machinery (ACM) is a US-based international learned society for computing. It was founded in 1947 and is the world's largest scientific and educational computing society."

https://en.wikipedia.org/wiki/Association_for_Computing_Machinery

ACM's 'Hypertext' Conference piloted Visual-Meta in 2021.

"Addressability" refers to how something can refer to something else. In the digital world this primarily means in a local file structure and a server based network. In academia is can refer to citation or references. In the physical world it can refer to a formal location layout, such as a flat so and so in house so and so, as well as cordinates. It can also man relative addressing, such as saying take a left after the third yellow house.

"Annual Symposium" hosted annually by Frode Hegland.

Frode Hegland sees this as level C of Doug Engelbart's Three Levels of Activity.

"AR" "Augmented reality (AR) is an interactive experience of a real-world environment where the objects that reside in the real world are enhanced by computer-generated perceptual information, sometimes across multiple sensory modalities, including visual, auditory, haptic, somatosensory and olfactory."

https://en.wikipedia.org/wiki/Augmented_reality

AR incldues the real reality, as opposed to VR which does not.

"ARC" Engelbart Concept: Augmentation Research Center, The name of Doug's lab at SRI where he

proposed a system called H-LAM/T in 1962 and developed and in 1968 demonstrated NLS: oNLine System, his platform for shared knowledge work research, later renamed Augment and from which I decided on the name Author, since Author and Augment share etymological roots.

"Augmented Copy" is what we call the metod of copying text from one location and pasting it with additional metadata, such as high-resolution addressing and citation information. It primarily uses BibTeX formatting.

"Augmented Text Company" The company which produces these tools.
https://www.augmentedtext.info

"Author" is my word processor for macOS, maybe later for iOS, which produces PDF's with Visual-Meta for any PDF viewer but which my Reader PDF viewer can parse to give the user rich interations. It is produced by my small, independent software development company The Augmented Text Company LTD, with programming by Jacob Hazelgrove.
https://www.augmentedtext.info

"AUTHOR" a word processor from the Augmented Text company.
https://www.augmentedtext.info/author

"BibTeX" is a specific format for conveying citation information within the LaTex environment, developed by Oren Patashnik and Leslie Lamport, released in 1985. The benefit of the system was to separate citation information from presentation style and it is human readable, though it slightly looks like code. It inspired the format of Visual-Meta and Visual-Meta contains a straight BibTeX section to allow the document which contains it to be cited.

"Bootstrapping" Doug Engelbart Notion.: The act of co-evolving the tool and human systems to make better tools and systems, thus pulling us up by our bootstraps. (For an overview, see the Bootstrap Paradigm Map). This is done on three levels of activity.

"Citation Standards" are used in academia to allow a reader to find a work external to the currently read work, through a description of the work, including, but not limited to, title, author(s), publication date, DOI, URL, location and so on.

"Co-Evolution" Doug Engelbart Notion: Most capabilities are improved, or augmented, by many interdependent technical and non-technical elements, of which tools make up only a small part: On one hand, there is the human system, which includes paradigms, organizations, procedures, customs, methods, language, attitudes, skills, knowledge, training and so on- all of which all exists within the basic perceptual and motor capabilities of the human being. On the other hand, there is the tool system, which includes media, computers, communications systems etc. Together, they comprise the augmentation system

"CoDIAK" Doug Engelbart Notion: CoDIAK (Concurrent Development, Integration, and Application of Knowledge) process aligns with the academic process of publishing and referring to published sources, though in his version there is considerably more speed and interactive options. He believed passionately in the notion of a Collective IQ.

Our capability for dealing with complex, urgent problems-i.e., "to understand them adequately, to unearth the best candidate solutions, to assess resources and operational capabilities and select appropriate solution commitments, to be effective in organizing and executing the selected approach, to monitor the progress and be able to adjust rapidly and appropriately to unforeseen complications, etc." in Augmenting society's collective IQs

"Collective IQ" Doug Engelbart Notion: A measurable group intelligence and the need for improving how we think together.

"colophon" a publisher's emblem or imprint, usually on the title page of a book which inspired Visual-Meta, which is similar data, in BibTeX form, at the back of a document.

"concept, defined concept, defined concepts" means, in this context, my experiment with useful

units of thought or knowledge, which can be defined in Author, hopefully soon in Reader. Stored as text.

The Map view uses the definition to draw lines where text from a definition is also present on the Map.

When a docment is exported to PDF the Defined Concepts become Glossary Terms.

This is as opposed to inferred concept.

Also aView in Author and in Reader (with Visual-Meta) to show all named entities (and headings).

"Dame Wendy Hall, Wendy Hall" Frode Hegland's PhD primary supervisor, along with Les Carr and David Millard.

"David Millard" Frode Hegland's PhD supervisor, along with Dame Wendy Hall and Les Carr.

"DOI" Document Object Identifiers. An effort to make addressing academic documents via the web more robust.

Used in Author to let the user paste a DOI to cite an academic document which is then sent to CrossRef to be parsed into BibTeX which is then used to create a full citation.

"Doug Engelbart, Douglas Carl Engelbart, Doug" From Wikipedia: "He was an engineer and inventor, and an early computer and Internet pioneer. He is best known for his work on founding the field of human–computer interaction, particularly while at his Augmentation Research Center Lab in SRI International, which resulted in creation of the computer mouse, and the development of hypertext, networked computers, and precursors to graphical user interfaces. These were demonstrated at The Mother of All Demos in 1968. Engelbart's law, the observation that the intrinsic rate of human performance is exponential, is named after him."

He was also my mentor and greatly influenced my work, resulting in my company called The Augmented Text Compant and my word processor being called Author, in honour of his 'Augment' system. Visual-Meta is inspired by his Open Hyperdocument work.

"Find" View in Author and in Reader (with Visual-Meta) where the user can see only the senteces

with keyword.

"Folded" View in Author and in Reader (with Visual-Meta) where the user can fold the document into an outline.

"Frode Hegland" Director of the Future Text Lab (FTL) https://futuretextlab.info

Director of The Augmented Text Company where he designed the macOS Author word processor, Reader PDF viewer and the Liquid text interaction tool.

https://www.augmentedtext.info/

Editor of the 'The Future of Text' series of books and Journal, which will be the basis of future 'The Future of Text' volumes.

Hosts 'The Future of Text Symposium' annually, starting 2011.

Designed Visual-Meta.

His mentor was Doug Engelbart and influced by Ted Nelson.

"Glossary" means, in the context of this work, terms and definitions in a 'Glossary' Appendix in a document.

This can be created in Author as a Defined Term which is then exported as a Glossary and included in Visual-Meta.

Reader can parse the glossary terms in the Visual-Meta and make them interactive.

This is different from a dictionary since dictionary definitions have general validity and Glossary terms only aim to express the author's point of view.

Defined Concept becomes Glossary Term when exported from Author to PDF.

Inspired by discussions with Doug Engelbart.

"Glossing" A way of elucidating parts of text.

https://www.etymonline.com/search?q=gloss

"Hamilton" a musical by Lin-Manuel Miranda which has influenced Frode Hegland greatly. The real person is also an inspiration since he used the power of text to write a new society into existence.

I use Hamilton in presenting the Map and Defined Concepts in Author since it's a fun and easy way to present the one-way relationship.

"high-resolution addressing" A Doug Engelbart Notion: Being able to link to/address/cite specific parts of a document, not just the document as a whole.

"hypertext" a term invented by Ted Nelson for interactive and connected digital text. Today it is very much about clicking on links but in Ted's early work it was all about freedom for the user.

"in-body citation" in this context, this refers to the citation in the body of the document.

In contrast, 'Reference' with uppercase 'R' refers to the appendix in an academic document which lists cites sources.

"Inferred Concept" are concepts extracted through human or machine means. Such as simply taking sentences which start with something 'is' and then using that as an inference that the writer meant that as a concept. This is as opposed to a defined concept.

"Ismail Serageldin" is a friend and supporter of Frode Hegland. They first met at the Science & Technology Forum in Japan quite a few years ago.

He is Egyptian, Founding Director of the Bibliotheca Alexandrina (BA) and was Vice President of the World Bank.

"Jacob Hazelgrove" Programmer for all Augmented Text tools for Frode Hegland, including Author and Reader, as well as imlementor of Visual-Meta export from Author and import and interaction in Reader.

"JATS" "Journal Article Tag Suite (JATS) is an XML format used to describe scientific literature

published online."

https://en.wikipedia.org/wiki/Journal_Article_Tag_Suite

"Les Carr, Leslie Carr" Frode Hegland's PhD supervisor, along with Dame Wendy Hall and David Millard.

"LIQUID" A text interaction tool from the Augmented Text company. It can be used in Author, Reader and most macOS applications.

https://www.augmentedtext.info/liquid

"manuscript" the authoring format, such as Microsoft Word, which is then either shared as-is, and stays editable, or is exported to be published in a publish format, such as PDF.

"map" View in Author.

Here the user can place text anywhere they want.

If there are defined concepts on the map, the user can click on them and lines will emanate to any text on the map which is in that text's definition.

"metadata" information about other information, in the case of documents, this can include structural information (headings for example), how they connect to other documents (References) and who created the document (self-citing)

"Names" View in Author and in Reader (with Visual-Meta) to show all named entities (and headings).

"NIC" Engelbart Concept: Networked Improvement Community "Consider an "Improvement Community" (IC) as collectively engaged in improving an agreed-upon set either of individual capabilities, or of collective group capabilities-e.g. a professional society. Let's introduce a new category, a "Networked Improvement Community" (NIC): an IC that is consciously and effectively

employing best-possible DKR (Dynamic Knowledge Repository) development and usage."
(augmenting society's collective IQ).

"NLS" From Wikipedia: "NLS, or the "oN-Line System", was a revolutionary computer collaboration system developed in the 1960s. Designed by Douglas Engelbart and implemented by researchers at the Augmentation Research Center (ARC) at the Stanford Research Institute (SRI), the NLS system was the first to employ the practical use of hypertext links, the mouse, raster-scan video monitors, information organized by relevance, screen windowing, presentation programs, and other modern computing concepts. It was funded by ARPA (the predecessor to Defense Advanced Research Projects Agency), NASA, and the US Air Force." https://en.wikipedia.org/wiki/ NLS_(computer_system)
SRI sold NLS to Tymshare in 1977 and renamed it Augment.

"Open Office Hours" I host an hour on Zoom every Monday and Friday at 4pm UK time for a community of people who are interested in The Future of Text. They have so far really helped polish Visual-Meta and provide thoughtful dialogue.

"paper" is a general term for a student or academic document in general.
Primarily in PDF when published or handed in.
In manuscipt/editable/personal form it is generall in the Microsoft Word format.

"PDA" 'Personal Digital Assistant'. This was before smartphones.

"PDF" Portable Digital Format develope by Adobe and now license free. It is an export format rather than a manuscript/working format.

"PDF" 'Portable Digital Format' developed by Adobe, now free with no license restrictions. It is a print to digial medium with few digital affoardances which my work on Visual-Meta expands to allow for users to interact with the document in useful ways, while staying compatibel with the basic PDF

format.

"PDF with Visual-Meta" PDF with Visual-Meta to allow Reader software to provide richer interactions for the user.

"Reader" is my minimalist PDF viewer for macOS, soon also for iOS, which can read any PDF and can provide added interactions if the PDF has Visual-Meta attached, which can either be produced by Author or any other word processor with Visual-Meta capability, or downloaded from an online repository which features Visual-Meta, such as the ACM digital library.

It is produced by my small, independent software development company The Augmented Text Company LTD, with programming by Jacob Hazelgrove.

https://www.augmentedtext.info

"References" is a list of all the citations a document uses, in an Appendix. In-Body citation, point to these References. This language is not fixed, it is sometimes used interchangably with Bibliography but in my context a Bibliography is a list of work not expressly cited but which are relevant.

in this context 'Reference' with uppercase 'R' refers to the appendix in an academic document which lists cites sources. In contrast, the citation in the body of the document is referred to as in-body citation.

"Research Question" RQ 1) How can rich interactions be enabled through rich metadata in PDF documents?

RQ 2) How do such rich interactions change the experience of the users, particularly, what interactions are useful?

RQ 3) What are the opportunities and barriers for wide adoption of such a system in education and research?

"Scoping Survey" was a survey in 2019 to better understand the needs of the academic commuity, carried out at The Unviersity of Southampton.

"Sparklines" From Wikipedia: "A sparkline is a very small line chart, typically drawn without axes or coordinates. It presents the general shape of the variation (typically over time) in some measurement, such as temperature or stock market price". originally invented by Laurnce Sterne in the 1700's.

https://en.wikipedia.org/wiki/Sparkline

"Student" for my work, the student is the primary user of Author for writing and Reader for reading.

"Teacher" in this context it the primary reader of a student paper.

"Ted Nelson, Theodor Holm Nelson" coined the term 'hypertext'.

"Text" is the basic 'stuff' of this work.

"The Future of Text" A series of symposia and books under the name 'The Future of Text' produced by the same people who run The Augmented Text Company.

https://futuretextpublishing.com

"The Future of Text Vol 1&2" Annual book series edited and published by Frode Hegland as part of The Future of Text.

Frode Hegland sees this as level C of Doug Engelbart's Three Levels of Activity.

"Three levels of activity" Engelbart Notion: A,B & C levels of activity are levels of work activity in the bootstrapping process:

(improving our ability to improve: a call for investment in a new future)

A level is the the work activity of the organization

B level is the activity of improving A, such as adding technological tools or improved work processes

C level is the activity of improving how we improve, something best done across organizations, in a

NIC.

"ViewSpec" Engelbart Notion: View Specifications for a user to see their work in different views to gain new perspectives and to navigate their document.

"Vint Cerf, Vinton Gray Cerf, Vinton G. Cerf" Co-inventor of the Internet, VP and Chief Internet Evangelist for Google. Chairman of the Marconi Society. Former executive at MCI, the Corporation for National Research Initiatives, the Internet Corporation for Assigned Names and Numbers (ICANN), the American Registry for Internet Numbers (ARIN), the Association for Computing Machinery (ACM) and member of the Faculty of Stanford University. Fellow of IEEE, ACM, BCS, AAAS, American Academy of Arts and Sciences, and American Philosophical Society. Member of the US National Academies of Engineering and Science and foreign member of the Royal Society and the Royal Swedish Engineering Society.

He has been a strong and vocal supporter of Frode Hegland's work, and Visual-Meta in particular.

"Visual-Meta" is my approach for embedding metadata in documents, initially PDF, to allow viewer software to provide rich interactions. The Visual-Meta is added as an appendix to the end of the document in a format inspired by BibTex.

http://visual-meta.info

"vm-id" The ID of the document is the Visual-Meta ID which is created like this:

{2021-7-17T18:00:00:00Z/documentti} < start with date and time the document's metadata/Visual-Meta was 'created' (in UTC), then the first 10 characters of the document title, or less.

(In the ACM pilot is is simply the DOI: vm-id = {doi10.1145/3372923.3404798})

OR like this, if the Visual-Meta was appended by reader software rather than added on creation:

{appended-hash-sha256-98765435678987654;reader(3.0)} < For documents which are already created (without Visual-Meta) where the reader software appends a vm-d for future reference. It is a hash of original PDF before Visual-Meta page is added, using a sha256 of the raw string value of the document, followed by the name and version of the software appending the vm-id.

"xFiles" Engelbart Notion: xFiles were intermediary file system for the Open Hyperdocument System (OHS) to serve as a Dynamic Knowledge Repository (DKR).

Endnotes

[a] https://futuretextlab.info/2022/02/06/initial-vr-for-ftl/ or PDF:

https://futuretextlab.info/wp-content/uploads/2022/02/intial-thoughts.pdf

Visual-Meta Appendix

The information in very small type below allows software to provide rich interactions with this document. See Visual-Meta.info for more information.

This is what we call Visual-Meta. It is an approach to add information about a document to the document itself on the same level of the content. The same as would be necessary on a physically printed page, as opposed to a data layer, since this data layer can be lost and it makes it harder for a user to take advantage of this data. ¶ Important notes are primarily about the encoding of the author information to allow people to cite this document. When listing the names of the authors, they should be in the format 'last name', a comma, followed by 'first name' then 'middle name' whilst delimiting discrete authors with ('and') between author names, like this: Shakespeare, William and Engelbart, Douglas C. ¶ Dates should be ISO 8601 compliant. ¶ The way reader software looks for Visual-Meta in a PDF is to parse it from the end of the document and look for @{visual-meta-end}. If this is found, the software then looks for {@{visual-meta-start} and uses the data found between these marker tags. ¶ It is very important to make clear that Visual-Meta is an approach more than a specific format and that it is based on wrappers. Anyone can make a custom wrapper for custom metadata and append it by specifying what it contains: For example @dublin-core or @rdfs. ¶ This was written Summer 2021. More information is available from https://visual-meta.info or from emailing frode@hegland.com for as long as we can maintain these domains.

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  name = {Collective IQ},¶ description = {Doug Engelbart Notion: A measurable group intelligence and the need for improving how we think together.},¶}
@entry{
  name = {colophon},¶ description = {a publisher's emblem or imprint, usually on the title page of a book which inspired Visual-Meta, which is similar data, in BibTeX form, at the back of a document.},¶}
@entry{
  name = {concept},¶ alt-name1 = {defined concept},¶ alt-name2 = {defined concepts},¶ description = {means, in this context, my experiment with useful units of thought or knowledge, which can be defined in Author, hopefully soon in Reader. Stored as text¶
The Map view uses the definition to draw lines where text from a definition is also present on the Map¶
When a docment is exported to PDF the Defined Concepts become Glossary Terms.¶
This is as opposed to inferred concept.¶
Also aView in Author and in Reader (with Visual-Meta) to show all named entities (and headings).},¶}
@entry{
  name = {Dame Wendy Hall},¶ alt-name1 = {Wendy Hall},¶ description = {Frode Hegland's PhD primary supervisor, along with Les Carr and David Millard.},¶}
@entry{
  name = {David Millard},¶ description = {Frode Hegland's PhD supervisor, along with Dame Wendy Hall and Les Carr.},¶}
@entry{
  name = {DOI},¶ description = {Document Object Identifiers. An effort to make addressing academic documents via the web more robust.¶
Used in Author to let the user paste a DOI to cite an academic document which is then sent to CrossRef to be parsed into BibTeX which is then used to create a full citation.},¶}
@entry{
  name = {Doug Engelbart},¶ alt-name1 = {Douglas Carl Engelbart},¶ alt-name2 = {Doug},¶ description = {From Wikipedia: "He was an engineer and inventor, and an early computer and Internet pioneer. He is best known for his work on founding the field of human–computer interaction, particularly while at his Augmentation Research Center Lab in SRI International, which resulted in creation of the computer mouse, and the development of hypertext, networked computers, and precursors to graphical user interfaces. These were demonstrated at The Mother of All Demos in 1968. Engelbart's law, the observation that the intrinsic rate of human performance is exponential, is named after him."¶
He was also my mentor and greatly influened my work, resulting in my company called The Augmented Text Compant and my word processor being called Author, in honour of his 'Augment' system. Visual-Meta is inspired by his Open Hyperdocument work.},¶}
@entry{
  name = {Find},¶ description = {View in Author and in Reader (with Visual-Meta) where the user can see only the senteces with keyword.},¶}
@entry{
  name = {Folded},¶ description = {View in Author and in Reader (with Visual-Meta) where the user can fold the document into an outline.},¶}
@entry{
  name = {Frode Hegland},¶ description = {Director of The Future Text Lab (FTL) https://futuretextlab.info¶
Director of The Augmented Text Company where he designed the macOS Author word processor, Reader PDF viewer and the Liquid text interaction tool¶
https://www.augmentedtext.info¶
Editor of the 'Future of Text' series of books and Journal, which will be the basis of future 'The Future of Text' volumes. ¶
Hosts 'The Future of Text Symposium' annually, starting 2011.¶
Designed Visual-Meta.¶
His mentor was Doug Engelbart and influced by Ted Nelson.},¶}
@entry{
  name = {Glossary},¶ description = {means, in the context of this work, terms and definitions in a 'Glossary' Appendix in a document.¶
This can be created in Author as a Defined Term which is then exported as a Glossary and included in Visual-Meta. ¶
Reader can parse the glossary terms in the Visual-Meta and make them interactive.¶
This is different from a dictionary since dictionary definitions have general validity and Glossary terms only aim to express the author's point of view.¶
Defined Concept becomes Glossary Term when exported from Author to PDF.¶
Inspired by discussions with Doug Engelbart.¶
},¶}
@entry{
  name = {Glossing},¶ description = {A way of elucidating parts of text.¶
https://www.etymonline.com/search?q=gloss}.},¶}
@entry{
  name = {Hamilton},¶ description = {a musical by Lin-Manuel Miranda which has influenced Frode Hegland greatly. The real person is also an inspiration since he used the power of text to write a new society into existence.¶
I use Hamilton in presenting the Map and Defined Concepts in Author since it's a fun and easy way to present the one-way relationship.},¶}
@entry{
  name = {high-resolution addressing},¶ description = {A Doug Engelbart Notion: Being able to link to/address/cite specific parts of a document, not just the document as a whole.},¶}
@entry{
  name = {hypertext},¶ description = {a term invented by Ted Nelson for interactive and connected digital text. Today it is very much about clicking on links but in Ted's early work it was all about freedom for the user.},¶}
@entry{
  name = {in-body citation},¶ description = {in this context, this refers to the citation in the body of the document.¶
In contrast, 'Reference' with uppercase 'R' refers to the appendix in an academic document which lists cites sources. },¶}
@entry{
  name = {Inferred Concept},¶ description = {are concepts extracted through human or machine means. Such as simply taking sentences which start with something 'is' and then using that as an inference that the writer meant that as a concept. This is as opposed to a defined concept.},¶}
@entry{
  name = {Ismail Serageldin},¶ description = {is a friend and supporter of Frode Hegland. They first met at the Science & Technology Forum in Japan quite a few years ago. ¶
He is Egyptian, Founding Director of the Bibliotheca Alexandrina (BA) and was Vice President of the World Bank.},¶}
@entry{
  name = {Jacob Hazelgrove},¶ description = {Programmer for all Augmented Text tools for Frode Hegland, including Author and Reader, as well as imlementor of Visual-Meta export from Author and import and interaction in Reader.},¶}
@entry{
  name = {JATS},¶ description = {"Journal Article Tag Suite (JATS) is an XML format used to describe scientific literature published online."¶
https://en.wikipedia.org/wiki/Journal_Article_Tag_Suite},¶}
@entry{
  name = {Les Carr},¶ alt-name1 = {Leslie Carr},¶ description = {Frode Hegland's PhD supervisor, along with Dame Wendy Hall and David Millard.},¶}
@entry{
  name = {LIQUID},¶ description = {A text interaction tool from the Augmented Text company. It can be used in Author, Reader and most macOS applications¶
https://www.augmentedtext.info/liquid},¶}
@entry{
  name = {manuscript},¶ description = {the authoring format, such as Microsoft Word, which is then either shared as-is, and stays editable, or is exported to be published in a publish format, such as PDF.},¶}
@entry{
  name = {map},¶ description = {View in Author¶

Here the user can place text anywhere they want. ¶

If there are defined concepts on the map, the user can click on them and lines will emanate to any text on the map which is in that text's definition.},¶

@entry{

name = {metadata},¶ description = {information about other information, in the case of documents, this can include structural information (headings for example), how they connect to other documents (References) and who created the document (self-citing)},¶}

@entry{

name = {Names},¶ description = {View in Author and in Reader (with Visual-Meta) to show all named entities (and headings).},¶}

@entry{

name = {NIC},¶ description = {Engelbart Concept: Networked Improvement Community "Consider an "Improvement Community" (IC) as collectively engaged in improving an agreed-upon set either of individual capabilities, or of collective group capabilities–e.g. a professional society. Let's introduce a new category, a "Networked Improvement Community" (NIC): an IC that is consciously and effectively employing best-possible DKR (Dynamic Knowledge Repository) development and usage."

(augmenting society's collective IQ).},¶}

@entry{

name = {NLS},¶ description = {From Wikipedia: "NLS, or the "oN-Line System", was a revolutionary computer collaboration system developed in the 1960s. Designed by Douglas Engelbart and implemented by researchers at the Augmentation Research Center (ARC) at the Stanford Research Institute (SRI), the NLS system was the first to employ the practical use of hypertext links, the mouse, raster-scan video monitors, information organized by relevance, screen windowing, presentation programs, and other modern computing concepts. It was funded by ARPA (the predecessor to Defense Advanced Research Projects Agency), NASA, and the US Air Force." https://en.wikipedia.org/wiki/NLS_(computer_system)¶

SRI sold NLS to Tymshare in 1977 and renamed it Augment.},¶}

@entry{

name = {Open Office Hours},¶ description = {I host an hour on Zoom every Monday and Friday at 4pm UK time for a community of people who are interested in The Future of Text. They have so far really helped polish Visual-Meta and provide thoughtful dialogue. },¶}

@entry{

name = {paper},¶ description = {is a general term for a student or academic document in general. ¶

Primarily in PDF when published or handed in.¶

In manuscript/editable/personal form it is generall in the Microsoft Word format.},¶}

@entry{

name = {PDA},¶ description = {'Personal Digital Assistant'. This was before smartphones.},¶}

@entry{

name = {PDF},¶ description = {Portable Digital Format develope by Adobe and now license free. It is an export format rather than a manuscript/working format.},¶}

@entry{

name = {PDF},¶ description = {'Portable Digital Format' developed by Adobe, now free with no license restrictions. It is a print to digial medium with few digital affoardances which my work on Visual-Meta expands to allow for users to interact with the document in useful ways, while staying compatibel with the basic PDF format.},¶}

@entry{

name = {PDF with Visual-Meta},¶ description = {PDF with Visual-Meta to allow Reader software to provide richer interactions for the user.},¶}

@entry{

name = {Reader},¶ description = {is my minimalist PDF viewer for macOS, soon also for iOS, which can read any PDF and can provide added interactions if the PDF has Visual-Meta, which can either be produced by Author or any other word processor with Visual-Meta capability, or downloaded from an online repository which features Visual-Meta, such as the ACM digital library.¶

It is produced by my small, independent software development company The Augmented Text Company LTD, with programming by Jacob Hazelgrove.¶

https://www.augmentedtext.info},¶}

@entry{

name = {References},¶ description = {is a list of all the citations a document uses, in an Appendix. In-Body citation, point to these References. This language is not fixed, it is sometimes used interchangably with Bibliography but in my context a Bibliography is a list of work not expressly cited but which are relevant. ¶

in this context 'Reference' with uppercase 'R' refers to the appendix in an academic document which lists cites sources. In contrast, the citation in the body of the document is referred to as in-body citation.},¶}

@entry{

name = {Research Question},¶ description = {RQ 1) How can rich interactions be enabled through rich metadata in PDF documents? ¶

RQ 2) How do such rich interactions change the experience of the users, particularly, what interactions are useful? ¶

RQ 3) What are the opportunities and barriers for wide adoption of such a system in education and research?},¶}

@entry{

name = {Scoping Survey},¶ description = {was a survey in 2019 to better understand the needs of the academic commuity, carried out at The Unviersity of Southampton.},¶}

@entry{

name = {Sparklines},¶ description = {From Wikipedia: "A sparkline is a very small line chart, typically drawn without axes or coordinates. It presents the general shape of the variation (typically over time) in some measurement, such as temperature or stock market price". originally invented by Laurnce Sterne in the 1700's. ¶

https://en.wikipedia.org/wiki/Sparkline},¶}

@entry{

name = {Student},¶ description = {for my work, the student is the primary user of Author for writing and Reader for reading.},¶}

@entry{

name = {Teacher},¶ description = {in this context it the primary reader of a student paper.},¶}

@entry{

name = {Ted Nelson},¶ alt-name1 = {Theodor Holm Nelson},¶ description = {coined the term 'hypertext'.},¶}

@entry{

name = {Text},¶ description = {is the basic 'stuff' of this work.},¶}

@entry{

name = {The Future of Text},¶ description = {A series of symposia and books under the name 'The Future of Text' produced by the same people who run The Augmented Text Company¶

https://futuretextpublishing.com},¶}

@entry{

name = {The Future of Text Vol 1&2},¶ description = {Annual book series edited and published by Frode Hegland as part of The Future of Text.¶

Frode Hegland sees this as level C of Doug Engelbart's Three Levels of Activity.},¶}

@entry{

name = {Three levels of activity},¶ description = {Engelbart Notion: A,B & C levels of activity are levels of work activity in the bootstrapping process:

(improving our ability to improve: a call for investment in a new future)¶

A level is the work activity of the organization ¶

B level is the activity of improving A, such as adding technological tools or improved work processes¶

C level is the activity of improving how we improve, something best done across organizations, in a NIC.},¶}

@entry{

name = {ViewSpec},¶ description = {Engelbart Notion: View Specifications for a user to see their work in different views to gain new perspectives and to navigate their document.},¶}

@entry{

name = {Vint Cerf},¶ alt-name1 = {Vinton Gray Cerf},¶ alt-name2 = {Vinton G. Cerf},¶ description = {Co-inventor of the Internet, VP and Chief Internet Evangelist for Google. Chairman of the Marconi Society. Former executive at MCI, the Corporation for National Research Initiatives, the Internet Corporation for Assigned Names and Numbers (ICANN), the American Registry for Internet Numbers (ARIN), the Association for Computing Machinery (ACM) and member of the Faculty of Stanford University. Fellow of IEEE, ACM, BCS, AAAS, American Academy of Arts and Sciences, and American Philosophical Society. Member of the US National Academies of Engineering and Science and foreign member of the Royal Society and the Royal Swedish Engineering Society. ¶

He has been a strong and vocal supporter of Frode Hegland's work, and Visual-Meta in particular.},¶}

@entry{

name = {Visual-Meta},¶ description = {is my approach for embedding metadata in documents, initially PDF, to allow viewer software to provide rich interactions. The Visual-Meta is added as an appendix to the end of the document in a format inspired by BibTex.¶

http://visual-meta.info},¶}

@entry{

name = {vm-id},¶ description = {The ID of the document is the Visual-Meta ID which is created like this:¶

{2021-7-17T18:00:00:00Z/documentti} < start with date and time the document's metadata/Visual-Meta was 'created' (in UTC), then the first 10 characters of the document title, or less.

(In the ACM pilot is is simply the DOI: vm-id = {doi10.1145/3372923.3404798})¶

OR like this, if the Visual-Meta was appended by reader software rather than added on creation:¶

{appended-hash-sha256-9876543567898765d;reader{3.0}} < For documents which are already created (without Visual-Meta) where the reader software appends a vm-d for future reference. It is a hash of original PDF before Visual-Meta page is added, using a sha256 of the raw string value of the document, followed by the name and version of the software appending the vm-id.},¶}

@entry{

name = {xFiles},¶ description = {Engelbart Notion: xFiles were intermediary file system for the Open Hyperdocument System (OHS) to serve as a Dynamic Knowledge Repository (DKR).},¶}

@{glossary-end}

@{document-headings-start}

@heading{

name = {Reusable 'bits' : Lists and Constellations},¶ level = {level1},¶}

@heading{

name = {Lines of thought},¶ level = {level1},¶}

@heading{

name = {Visual-Meta Backlinks},¶ level = {level1},¶}

@heading{

name = {Questions for future items},¶ level = {level1},¶}

@heading{

name = {So… Keep it in the document},¶ level = {level1},¶}

@heading{

name = {Glossary},¶ level = {level1},¶ showInFind = {false},¶}

@heading{

name = {Endnotes},¶ level = {level1},¶}

@heading{

name = {Visual-Meta Appendix},¶ level = {level1},¶}

@{document-headings-end}

@{paraText-start}

@paraText{

glossary = {Glossary},¶ endnotes = {Endnotes},¶ visual-meta = {Visual-Meta Appendix},¶}

@{paraText-end}

@{visual-meta-end}