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Revising the Map: Modulated Mapping and the Spatial Interface

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ABSTRACT The map can be active, malleable, open source fed, and even, in a sense, intelligent and able to adapt. The possibility also exists for this map to have a function that based on key words will search databases on-line to find maps, animations, histories and stories etc to place within it for your study and engagement. The map is thus a platform and yet is active. Community is possible as people can communicate graphically in works placed on the map and in building mode in the tool. All the tropes of locative media are to be in a mapping system of channels of augmentation and a spatial net. The software by design will allow development on the map and communication like programs such as second life but in mapping itself.

REVISING THE MAP: MODULATED MAPPING AND THE SPATIAL INTERFACE

Mapping, or cartography, to use the fancier term, is simply a tool that answers the question: where are we? This tool's face and structure could once only show signs of fluidity in terms of name changes and borders, but deeper and subtler signs of fluidity for both physical and cultural evolution had yet to change the map's nature until the advent of such technology as GIS and GPS. Mapping and mapping tools are no longer static. We are in a time, arguably, that is the greatest cultural return to cartography and, in tandem, progression of mapping and related tools in several hundred years. GPS units in cars and in phones are now ubiquitous and continually progressing in interface design and functionality. Locative media in several areas, from art to modes of annotation of spaces, are also evolving at a rapid rate. A confluence with increasingly sophisticated modes of social networking and data insemination of mapping and spatial augmentation need to occur.

MODULATED MAPPING

"Modulated Mapping" (mapping tool to fuse cartography to social networking and simultaneous multi–tiered augmentation) Modulated Mapping is an online tool that will allow channels to be run along the map itself. This will allow one to view different icons and augmentations both as systems on the map and in deeper layers of information (photos, videos, animations, immersive visualizations, etc) that can be turned on and off as desired. The different layers of icons and data may be history, dissent, artworks, spatialized narratives, and annotations developed that are communally based on shared interests; placed spatially and far beyond. The use of chat functionality in text or audio will be open in building mode and in mapping navigation/usage as desired. This also allows a community to develop or augment in the spaces on the earth (variable polygons on the actual maps). These nodes can be larger and open or small and set by groups in their channel. The end result is an open source sense of mapping that will also have a needed sense of user control as one can select which layers of augmentation they wish to see and interact with at any time. It also will incorporate all the functionality of locative media in mapping software and mapping.

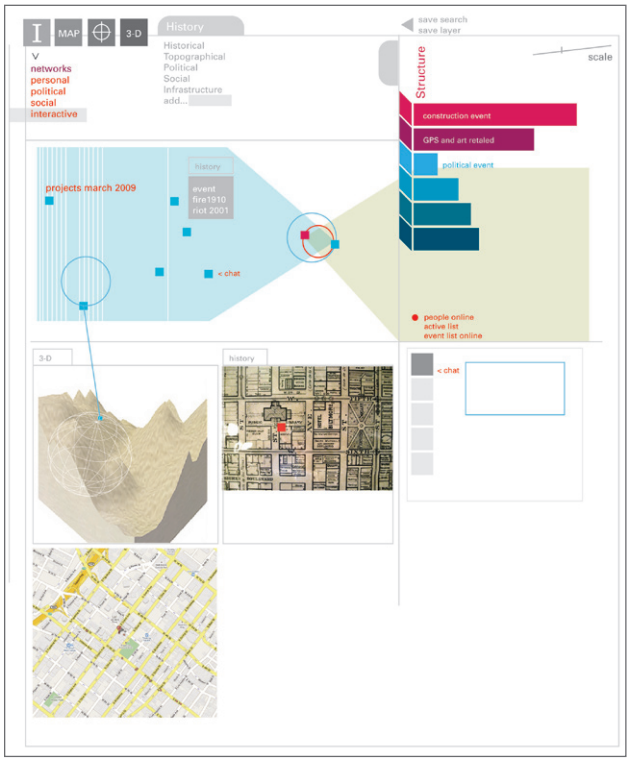
THE INTUITIVE MAP

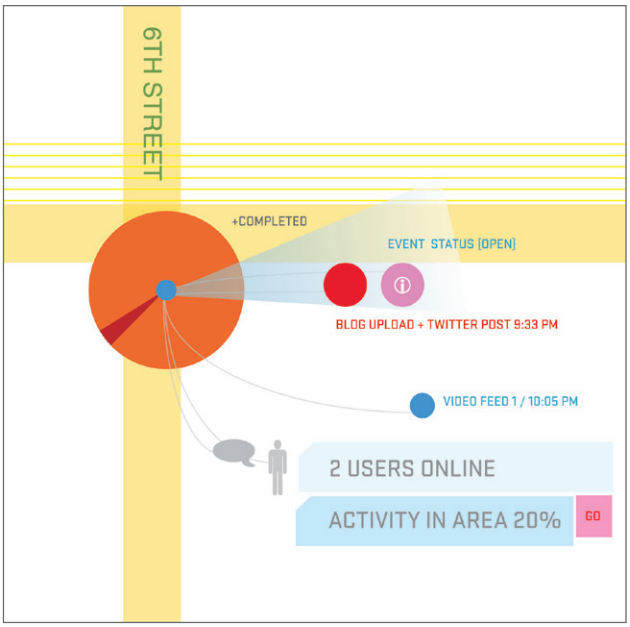
Modulated Mapping also provides an area of key functionality that moves into more intuitive software. Upon continued usage, the mapping software will "learn" and search based on key words used and spheres of interest the user is mapping or observing. In this manner the tool will integrate deeper data and types of animations, etc. into the map or will have them waiting to be integrated upon user approval as desired. Over time the level of sophistication of additions and of search intuition will increase dramatically. The search can also, if the user wishes, run in the back end while working in the mapping program, or in off time as selected while doing other tasks. (It can never be used if one is not interested.) One of the key elements of this mapping is that it is not composed of a closed set or needs user hacks to augment, but instead evolves and deepens through user controls and desire.

For example, a student can be studying with the aim of knowing more about the history of San Francisco and return to the program to find a located animation to run a graphic on the map of the fire after the San Francisco 1906 quake. They may also have the option to run audio commentary and roll over info on key locations in the fire on a time line found on another database. The two then will run as an integrated whole and allow the student a spatialized deep method of studying this key part of the city's history.

Again, researcher may be studying the Roman Empire and wish to observe more specific details. In the software the student can run a graphic animation on a map of the empire's rise and fall over time overlaid on a

topographical view of the area. The animation can be rotated and zoomed as well as paused like a video. The effect will be to see the rise and fall of empire both incrementally in periods over time and as a sort of form over the actual landscape to see it break into pieces and decay, almost in a visual sense like watching erosion but with viewer control of its progression.

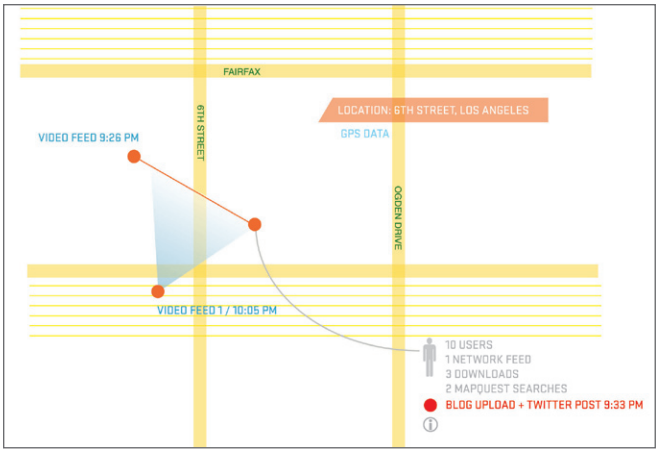




MAP AS DATABASE AND SECTIONAL VIEW OR "SLICE"

Modulated mapping also allows for an ease of function in a tool/building interface akin to that of Adobe Illustrator or Photoshop yet with many user options and an open end for added applications within the user community to build even further. One tool will allow for a section to be selected like using the lasso or cut options in Photoshop but with a very key difference. The user can lift the section up off the larger map as a geometric "slice" to move and zoom in and out above the larger area being examined. This can both allow for greater examination of specifics in a location isolated from the larger area for study and for augmentation of a specific section in greater detail.

Importantly, this use of straightforward tools allow for data clustering and retrieval in a new way. One can also select with the lasso a layer of similar augmentation only. This can then be dragged and dropped for study. This takes a net-based functionality and spatializes it as a map function. The keyword search, instead of yielding websites one at a time with varying degrees of relevancy, can instead lift a skin of data connected by topic/channel from the map that can then be studied as a group with very similar relevancy. The map can be a searchable database and organizing tool for information groupings. Spatial searching is the result. And the viewer will also have the information grouped on the map to return to as though a spatial internet. The possibilities are extensive.



Images: Paul Wehby and Jeremy Hight in collaboration

LOCATIVE MEDIA TROPES TO BE INCORPORATED INTO MAPPING AND ITS AUGMENTATION

Locative media is a term increasingly used in our culture and it refers to several key issues. Locative media may range from the tool in your car or phone that tells you how to get to a restaurant to the augmentation and interpretation of spaces tied to a specific location. It is also a return to cartography in a sense, yet withan analysis and re-examination of map, space, information and movement.

Locative media allows geo annotation, data placed on an active grid space commonly used, narrativization of spaces (telling of the deeper layers of space at the location itself) graphics placed on spaces to indicate deeper and subtler visualizations of data of the space, users, and other types of information. It is time for the map from specific locality to globe to be infused with these greater layers of functionality and capability of telling data of a space and spatially tied for context.

Another locative trope that is to be incorporated in this mapping in both tool and function is of the narrative of a space or the sense of "narrative archaeology" (reading a space and its deeper layers of info over time and in parts of the space). The tool in use over time will only increase the layers of information in different media to be embedded into different spaces in the world. This in the tool will be a simple tool function as though in Photoshop or Illustrator along with the other main functions. This will allow places on the map to be augmented with not just images but everything up to complex interactive visualizations.

MAPPING OF ESOTERIC: PLACING OF FICTIONS BOTH TEXTUAL AND SPATIAL FROM REGIONS INTO VIEW AND ACCESS FOR ANALYSIS

A lesser known area of locative media to be available for open mapping is the placing of fictions tied to spaces not only in works designed for this function or "locative narratives" to run along the map, but of the spatializing of stories and works of authors into spaces previously unforeseen upon completion of the text. Works by authors can be placed in the place they described for others in the related channel or channels to read or in some cases add to as new communal fictions in a place on the map. This can be done on maps locally all the way to globally and communities can work together in the software building usage either in reading and sharing such spatially placed fictions, poems, or essays or in building them into maps of key places.

Another interesting aspect of this is the ability to access older, outmoded maps or even more esoteric kind of "folk maps" that have been made to document unusual items in specific regions ranging from mythologies and folkloric figures and their regions to lesser known accounts of people in the past. This work accessed in a larger map can allow these more unusual but deeply relevant bits of history and place to be placed in context within the scope of history and place.

GEO–SPATIAL NET

It is also imperative that locative media works be connected spatially. The works are deep augmentations and examinations of a particular place, but are currently not connected to each other, instead being experienced individually with online secondary documentation. These works are a deep layered examination of place and data and need to be integrated as a growing layer of augmentations spatially across the world. This mapping system allows for these works to be geo-located as both icons on a globe and as files to unpack from these icons. This is a fascinating development as one can either observe a general sense of these otherwise site specific works from anywhere or unpack them to run if in that location. One will be able to visit a city and see as they move multiple icons denoting locative media works and can experience several and see deeper layers of examination of a place as connected on a menu and thus see the augmentation from different artists, researchers and historians on a GPS enabled phone or device. This also will be true of immersive event time visualizations (immersive visualizations of events in time that are interactive). A person can also visit a city and experience layered documentations of the inter-connected data within an important event that occurred there from this map.

MAP ICONS AND BORDERS RE-CONTEXTUALIZED: ICONOGRAPHY AND BORDERS AS PLACES ALSO OF COMMENTARY

The icons of the map also are not to remain static in this mode. What is a border? Is it only a line, demarcation, geometry and pragmatic delineation and nothing else? No. In some channels or modes of viewing the map icons will be represented as geometric objects that are no longer flat for better sense of these spaces, functions and forms. This also allows another channel or community of people local to global to augment these icons with embedded commentary in ranges of media. Artworks of political and semiotic commentary occur along national borders such as the one between the U.S. and Mexico annually. Now they can occur on a permanent and fluid basis globally on the map itself. One can scroll toward the board and see embedded videos, animations, locative works to unpack and run or objects made to be placed along the border as visual commentary (like works done in Second Life but

in real space and the map itself). This allows a dialog and semiotic re-interpretation that deflates the map icons long standing sense as only pragmatic lines of separation and deeper meanings of conflicts and nation states. The map itself is a visual dialect and dialectic, this necessitates commentary and non-stasis as mapping and our interactions both socially and with data progress.

In building mode and in map mode, icons will be coded to represent within channels (remember that the person using it has selected channels of augmentation from many based on their current interests and needs). Icons will be coded as active to show work in progress in cities and the globe to both invite participation and to further agitate the map from the sense of the static as action is visible even with its icons as people are working and community is formed in common interest/need.

MAP AS NEWS SOURCE/ GEO-SPATIAL, LIVE-INFORMATION DISSEMINATION

Information access is crucial and even in an era of multi-tasking accessibility we are disconnected to a degree. The larger news networks watch the blogs, but with a myopic eye, or in other words, with delay and limited view. Events occur in places. Fast changes and rapid shifting elements occur differently from minute to minute as well as neighborhood to neighborhood. It is established by now that the blogger or local citizen twittering or using another social networking tool can often be in these key changing conditions in terms of information dissemination, reporting, etc. The problem is that to most this is information either not known or seen in isolated context of a screen view after several links from a search. This is a problem.

The seriousness of concern about information from a place needing to be better linked is illustrated starkly and with immediacy in the example of Hurricane Katrina. Some blogging citizens stayed and were posting the most immediate, raw and at times, crucial up to the minute information during the disaster but were for many difficult to find or not known of at all. The paradigm of going from a web site recommendation to a secondary site and to a third or fourth link is the standard but can be vastly improved if allowed to function spatially. Imagine a disaster or political tension or other unfolding event and the city having icons as well as specific streets or neighborhoods that denote live and recent updates of events unfolding and important information with roll over info as to what topic the latest information is about in relation to the event. This removes the clicks on links or on the larger scale not even knowing where to look for local updates. From the map itself will emanate and facilitate news, within its spaces.

CONCLUSION

It is essential to formulate modes of further integration into what can frankly be described as a spatial net and mapping that is a tool and interface that is intuitive, open source and with functionality within it of many functions of the internet itself. The map itself is to no longer be static; mapping is not either. The need is for a greater range and hybridism of mapping and user options in augmenting or examining the many layers of information in any place.

BIOGRAPHY

Jeremy Hight has published over twenty essays in various fields of technology, locative media, mapping and critical theory. He created locative narrative. He is co-editing a special issue of *Leonardo* on immersive visualization. He is co-curating a series of exhibitions of pioneers in art and technology beginning with Vuk Cosic. He recently presented a key note speech on reconsidering maps and spaces at In Transition.

Participatory Community Design Chart

NOTES

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