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Augmented Reality Research: The Hidden Discourse Community

Researchers strive to make achievements in different facets of their field than

entrepreneurial types. At the start of any new market, there are teams of researchers meticulously

studying implications and applications for new technologies. Before releasing any product on a

consumer level, it must first be extensively vetted for quality assurance and its usability clearly

understood. This is especially true for the tech industry. Practically any mundane computer,

machine, or tool is the result of scrupulous iteration that is founded on the back of research

presented in published white papers. An example of such a field, which still is in its scrupulous

iteration period, is augmented and virtual reality. Those who dedicate themselves in the analysis of

this technology are in themselves a unique community. How this group operates amongst itself and

what properties of a discourse community manifest amongst this group are the central points of

analysis for this paper.

A discourse community, as defined by John Swales, is a group that holds six distinct

characteristics. That means that the community must have a broadly agreed upon set of goals, such

as, an objective or deadline that must be met (Swales 220). It has to have a reliable means of

communication; convening in a central location and talking through online messaging systems are

viable means of recouping (Swales 221). It has to utilize at least one standardized form of genre that

contributes towards the achievement of the group's ambitions (Swales 221). The community has to

use unique speech patterns, or lexis, which are specific to that group; were an outsider to attempt

holding a conversation with a member of said discourse community concerning their specialization,

the outsider would feel amiss (Swales 222). Lastly, a discourse community must maintain a certain degree of membership with a balance between experts and novices (Swales 222).

An example of a research group that focuses on the study of augmented and virtual reality interfaces is the Interactive Systems and User Experiences Lab (ISUE) at UCF. I entered the discourse community, as a member, alongside a colleague of mine nearly a year ago. We both arrived as novices, knowing only one other member and little-to-none of the community's overall goals or communication habits. I gained my overall understanding of the particular lexis through my interactions with expert members. What little background of the discourse community I held before entering as well as my newly obtained terminology hastened my inauguration and lead to my inclusion in ISUE's augmented reality research team, of which I am an active participant.

ISUE has a series of projects and communal objectives that are spread out amongst its members. A variety of different projects are in continual development year round. These projects tend to have a central theme of human-computer interaction, as that is ISUE's focal point of research. One or many members can be assigned to a project until its completion and subsequent publication. And it should be noted that these projects can still remain similar in objective while being diverse in substance. The idea of "commonality of goal, not shared object of study [is what is] criterial" in this scenario (Swales 220).

Publications are one of the primary motivating goals for members as they can be sizeable improvements to one's resume as well as a facility's reputation. There are several variants of papers that are developed. Some describe experimental results, while others present novel ideas that have never been conceived of before, but most build off the shortcomings of previous related work. Once the work is publication ready, the concepts are detailed in a scholarly document and submitted for approval to a pedagogic conference pertaining to the work. Revered conferences often have low acceptance rates, which tends to make research a competitive environment. Another goal ISUE aims

for is to fulfill contracts for concentrated investigations on particular ideas. This can be in the form of grants, access to proprietary tools, and more.

Communication is a vital tool at the disposal of the technology focused research organization. Many teams use a form of direct messaging for improved workflow, and ISUE is no different. Slack is one such tool that works well for teams. An instant messaging system lends itself well to quick, imprecise, and informal conversations. Members use it to keep informed on a uniform basis. More formal types of communication are present in the form of email. Email tends to be a more drawn out process and is more formal in nature. Mailing lists are sent out periodically to fill members into relevant email chains. Formal weekly meetings are the principle gatherings, consisting of most community members as well as the occasional outsider. Project statuses are relaid to the research director, who is in charge of coordinating all research efforts, as well as to any uninformed.

The hierarchy at ISUE subsists of an assorted mix of students and university faculty. The experts are the professors in charge of overseeing students progress, as well as post graduate faculty designated to part time senior research. These members are highly active, many of whom have been involved in ISUE for over a decade. The newer members include undergraduate as well as graduate students. Many of whom, are familiar with the objectives of the community upon arrival and perform the brunt of the scientific studies. Many newcomers usually apply to join the discourse community out of interest in the subject and for independent study college credit, although some are recruited.

Popular mechanisms for educating novices in proper communication habits and lexis choice are used within ISUE. Novices learn the terminology required of them through autodidacticism and experience. Weekly meetings provide novices with a way to become accustomed with any unheralded terms used by experts as well as probe for clarifications to any unresolved questions.

Such meetings also serve as a scheduling forum. They provide a certain level of correspondence needed to keep the community alive and cohesive, otherwise there is a chance the community might not survive (Swales 223).

Terminology is varied within the AR user interface research community. Intercommunications tend to be terse since a certain level of comprehension of the material is assumed amongst fellows. Often times, programmer specific jargon, such as, "mesh" can be lost upon the ignorant. In certain contexts "mesh" can be replaced with "net", but from this discourse community's perspective it refers to the digital representation of a physical world, or in other words a list of triangles in a 3D space which represents physical shapes on a computer screen. Such a concept may not be understood by a psychologist venturing to collaborate with a technologically literate group, but is perfectly sufficient amongst discourse community members. Extending off of this idea, it would be hard to imagine any outsider entering into an ISUE convention and understanding every single word that was said (Swales 222).

Intercommunication terms tends to seep into any published white papers produced by the discourse community as well. Since the intended audience for the papers is assumed to be familiar with related background work or at the very least capable of locating previous publications, the text tends to be written with a high level of abstraction. Related work is linked and referenced using unintrusive symbols, defined towards the start of the text. Content tends to be valued more than personal accolade. The papers are designed to be scientific by nature and replicable by others; the use of personal pronouns is often avoided for this reason.

Augmented and virtual reality research groups are discourse communities that have unique communication habits and goals not seen in many other places. The research lab where I work, ISUE, uses special communication tools to accomplish it's goal of publishing papers and completing contracts. It utilizes several organizational techniques to work and communicate

effectively, all in the name of white paper completion. These are all qualities of a discourse

community detailed by John Swales.

Works Cited

Swales, John. "The Concept of Discourse Community." *Writing About Writing: A College Reader*.

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