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| **[**Analysis of Audience for Articles Pertaining to the Effects of Online Latency**]** |
| In this report I will examine the intended audience for articles of the same overall theme, latency. A scientific, professional, and general audience article are analyzed. |

**Introduction**

In this report I will examine three articles. The articles are all similar in the overall theme of latency. Dictionary.com describes latency as the time it takes for a packet to cross a network connection from sender to receiver. In a basic sense, the higher the latency, the longer it takes for informational input to be registered. This period of latency (in the general sense) has a great impact in online gaming. Imagine a gaming tournament that was being played online with players around the world. If latency was high, from the time the gamer hits a button and the subsequent action is performed in the game, seconds could have passed by. In competitive and even casual gaming atmospheres timing is everything. This input lag caused by connection latency can be a difference of life or death to gamers around the globe.

I organize this report in an article-by-article pattern. I start off with a scientific study called “The Effects of Latency on Online Madden NFL Football”. This article is oriented toward a scientific audience. The next article I take a look at is called “Latency Compensating Methods in Client/Server In-game Protocol Design and Optimization”. The highly specialized, jargon filled title indicates a professional audience. Lastly, I analyze an article for general audiences. The title of this article is “’Call of Duty’ Players say Lag is Ruining Online Gameplay”. This piece of writing is geared toward the general reader because of the publication it is in, The Huffington Post.

Each article is analyzed and organized by the following criteria: introduction, conclusion, subordination, documentation, graphics, language, point of view, theoretical approach/methodology, review of literature, placement of thesis, title, organization, advance organizers, and page layout/design. Every subsection has examples selected from each text to support my assumptions. The overall report is followed by a conclusion summing up the entirety of the analysis.

**Scientific Article (“The Effects of Latency on Online Madden NFL Football”)**

Scientific research articles are used to convey information to other scientists on the topic of their research. The standard format for articles of this nature is similar across the board for scientific papers. Information is presented in a logical and orderly manner and always incorporates the use of an abstract. In “The Effects of Latency on Online Madden NFL Football” it is simple to identify its audience and purpose. An analysis of various criterions follows.

**Introduction**

In this specific article the introduction is conspicuously placed and in an expected location. It begins immediately by listing facts and statistics about the gaming industry. The first sentences start:

In 2002, over 221 million computer and video games were sold, or almost two games for every household in America. Computer games was the only entertainment industry to continue to grow in 2003[5] and as of the end of 2003, gross revenue from computer game sales surpassed revenues from movie ticket sales, video rentals and concert tickets[4].

The first paragraph of the introduction continues with this fact and statistic driven format. It is a good way to compel the reader and give purpose to the research. It shows that the research is pertinent and that many people are associated with gaming. The introduction continues to explain why the article is important and that while studies on latency and gaming are prevalent “…quantitative studies of the effects of latency on sports games has been lacking.” It goes on to describe that latency is more detrimental in first person shooters but sports games must be studied to fill in the knowledge gap. The final paragraph of the introduction describes the three main contributions to the study of online sports games and of sections to follow.

Introductions to scientific articles and scholarly journals have a sober, more serious look. This is important to display because of the level of professionalism required in articles like this. The introduction is not extremely lengthy but does contain the filler of facts and statistics throughout the entirety of the paragraphs. Explanations of why the study is justified are part of the composition. Lastly, the introduction ends with a description of upcoming sections and a summary of what the article sets out to accomplish or explain.

**Conclusion**

The conclusion of this scientific study is very short in comparison to the introduction. It continues its theme of professionalism and use of language that requires some technical background. Early in the conclusion of the article there are examples of the technical language:

Our experiments suggest that online Madden NFL football uses a prediction of the round-trip time to delay user input in an attempt to compensate for any latency effects across both players. This technique, while effective for symmetric latencies, fails in the presence of asymmetric latencies.

While not excessively convoluted with industry specific jargon it does use language that targets a scientific or more schooled audience. The conclusion sums up the results of the study and explains problems they encountered during the process. For example, “Our ongoing work is to determine more effective ways to evaluate latency on passing performance” shows that some methods used in the study were not adequate in measuring all variables, such as passing the football. The last sentence of the article is a call to action of sorts. The article suggests “…further investigation of other types of sports games, such as soccer to determine their susceptibility to latency”. The conclusion summarizes the study and explains all the data. It discusses the problems that occurred and recommends future studies of sports gaming latency.

**Subordination**

Hierarchal relations in this scientific article are organized in a straightforward and simple manner. Most scientific journals follow a similar format and that is why they are easy to identify. Scholarly journals and studies more times than not have an abstract and this article is no different. It flows in an obvious hierarchal relation and even uses a numbering system to identify each subheading and section. The setup is as follows: abstract, introduction, network game testbed, latency compensation, impact of latency on user performance, network-level measurements, conclusion, and references. Other scientific journals will follow the format of abstract, introduction, point one, point two, point three, conclusion, and references. The article also displays the unique format of the “tow columns of text per page” style. This style distinguishes it from types of writing.

Pertaining to subordination in a strictly grammatical sense this article does not make use of subordinating conjunctions as much as other articles. This does make sense because the audience is of the scientific persuasion. Simple sentences without conjunctions are of greater benefit. Piece by piece the study was explained with little need for subordination. For example:

The lab results confirm our diagnosis. They have been sent to the attending physician.

No subordination needs to be used, although it is always an option, it is simpler to keep this format to keep tonality of the scientific article.

**Type of Documentation**

The citations in this article are again done in a professional and scientific way. Scholarly journals or studies always cite their sources in the form of footnotes and/or bibliographies. Generally the references page is lengthy in comparison writing intended for other audiences. This article makes use of in-text citations, footnotes and a reference page. The following sentences, also used above, show how this article makes use of citations and footnotes:

In 2002, over 221 million computer and video games were sold, or almost two games for every household in America.¹ Computer games was the only entertainment industry to continue to grow in 2003[5] and as of the end of 2003, gross revenue from computer game sales surpassed revenues from movie ticket sales, video rentals and concert tickets[4].

The bracketed numbers in the text correspond to the references page. The references page has the bibliographical information of the sources of where the facts were obtained. The superscript digits refer to footnotes that are included below the text. These are simple references to basic facts from reputable webpages. These citations differ from the bracketed digits because they are not from literature or other scholarly articles.

**Type of Graphics**

The graphics used in this article are heavily supplemental to the text. They are in the form of graphs, screenshots or diagrams. None of the graphics are for any purpose other than to enhance understanding; this is in contrast to other articles that are intended for other audiences. Each figure is labeled and numbered in a professional or scientific manner. There is a consistent size to each figure. The graphics are inserted only to help the reader understand the points that the article is trying to convey. The graphics that seem to be of most importance in a scientific article are the graphs. The information is better comprehended when displayed in graphical form.

**Type of Language**

The language used in this particular scientific article is on a college or professional level. Nothing is over the top but it does take a certain comprehension and slight technical or scientific background to understand or be interested in. It is very formal in style and uses some specialized language, even some jargon. For example, the following sentences:

This latency compensation technique also explains the results seen in experiments one and two, as shown in Figures 7 and 8. In the first experiment, Alpha processes the user input and waits for ½ of the estimated round-trip time (approximately 750ms) before rendering the player movement.

The language is descriptive in nature and almost tutorial like in its level of detail. It is very distinct in comparison to articles that are aimed at different audiences. It is not afraid to alienate casual readers and it is not intended for them. Scientific articles are of interest to other scientists in fields around the topic or students.

**Point of View**

The point of view of this article is first person. The words us, our, and we are used frequently. It is to be expected because this is a scientific article that presents the results of those people. Active voice is used in the article because the subject of the sentences performs the action. For example, “We choose to focus on the effect of latency on the two fundamental offense components: running and passing.” The subject is performing the action of focusing on the latency of running and passing. Most scientific articles should follow this format and this article is no different.

**Indication of Theoretical Approach**

This article describes in the introduction that they feel there are not enough studies on the effects of latency in sports games. The main goal is bridge the gap between sports games and other more popular sports games when referring to the detriment of latency. A call to action at the end of the study says “Finally, we suggest further investigation of other types of sports games, such as soccer to determine their susceptibility to latency.” The point of view regarding this subject overall, by the author, is that there needs to be more studies done on this topic.

**Indication of Methodology**

Data was collected in this study by their own methods and other measuring tools already made available by other scientists. They collected data from two PlayStation 2 consoles using two separate copies of Madden 2001. Latency time was recorded based on whether the ball was being passed or the ball was being run. The data was charted and summarized in the final sections of the study. Overall, there was no indication of any bias besides the fact that this is the only study of latency effects on a football game.

**Review of Literature**

The entirety of this scientific article made use of primarily secondary sources. Sources of information include documents that support statistics and facts. Although it does mostly seem to consist of secondary sources there are instances of primary sources. For example, a reference to “An experimental Estimation of Latency Sensitivity in Multiplayer Quake 3” is an example of a primary source because the origin of information is of a researcher.

**Definition of Terms**

The nature of a scientific article does not lend itself toward defining words for the readers. This article does not define any terms and expects the reader to be other scientists of or relating to a similar industry. This is a large distinction when comparing the audiences of other articles.

**Placement of Thesis**

The placement of the thesis or main argument of this scientific article is in the abstract. The abstract is a huge identifier of scholarly articles and studies. No other form of writing should include an abstract unless it is of a similar relation to a scholarly article or study.

**Type of Title**

The title of this article is “The Effects of Latency on Online Madden NFL Football”. This title in a few simple words explains the main idea of the article, which a good title should always do. The use of the word “latency” and “The Effects of” indicate an article of more scientific nature. A person just glimpsing at the title can determine instantly whether or not it is something of interest to them and likely if you are not a scientist or student there is little reason to want to read it.

**Organization of the Argument**

There is not a defined argument in this scientific article but the content is ordered in a fashion that all articles in the same category are, in chorological order. Beginning with an abstract and going step by step through the methods of their study. Pictures and graphs are spread throughout to increase ease of use. Lastly, a conclusion that sums up the results of the study comes right before the reference section.

**Type of Advance Organizer**

All articles of a scientific nature, like this one, will have an advance organizer in the form of an abstract. It differs from all other types of articles in this way. The audience who reads this type of article expects this type of format beginning with the abstract.

**Type of Page Layout and Design**

The audiences of this article are other scientists in a similar field of scientists doing research where an article of this nature would be of assistance. The layout is a “two column per page format” which doesn’t necessarily identify all scientific articles but most are in this format. Page numbers are located at the bottom along with many footnotes and in text citations. Another thing that stands out about the layout are the graphics and diagrams are labeled. For example, using the words “Figure 1” indicates a reference to something educational or supplemental to more advanced material. The text is much smaller than other articles that are geared toward a general audience. Also, in comparison to other articles, it is rather lengthy. General audiences do not want to read a lengthy study and the opposite is true with scientists, they need the details.

**Professional Article (“Latency Compensating Methods in Client/Server In-game Protocol Design and Optimization”)**

In contrast to scientific research articles, professional type articles cater to a very specific audience. While scientific articles are specific to other scientists they do not require the scientist to be of the same exact scientific persuasion or have the same theories/ideas. The author of a professional article caters his/her writing to other professionals in the same industry, who do the exactly the same job as the author. In the article “Latency Compensating Methods in Client/Server In-game Protocol Design and Optimization” I will go by the same criteria as above and through the description of differences a better understanding of how the writers cater to specific audiences should be understood.

**Introduction**

In this professional article there is not an obviously labeled introduction. The section called Overview fills this role. The overview goes over the topics that are covered in the article and explains why their article is important to be written. The article validates itself similarly to the scientific article. This is to be expected from introductions because no matter the audience, an introduction is there to explain or validate the need for the article. For example the following sentences demonstrate how the article expresses the purpose:

Designing first-person action games for internet play is a challenging process. Having robust on-line gameplay in your action title, however, is becoming essential to the success and longevity of a title.

This explains the problem and tells the audience that the following sections will be describing how to overcome the challenging processes. It is not really fact based in a sense of citations and references but does contain factual information that someone in the industry would consider to be fact.

**Conclusion**

The conclusion is very simple and even shorter than the scientifically based article. It is not there to summarize any findings or request a call for action. The professional article simply explains that lag compensation is an important tool and why the article was an important read. It is slightly persuasive in nature. The following, for example, “For Half-Life, Team Fortress and Counter Strike, the benefits of lag compensation easily outweighed the inconsistencies noted above” shows a slight lean to it. The article is for professionals in the same field as the author but the author wants to show through this article that lag compensation can be frowned up but is very necessary.

**Subordination**

The hierarchal relations of this professionally slanted paper are in a basic, bold heading to paragraph format. It goes through in a tutorial like fashion without the handholding of a tutorial explaining things section by section. It differs from the scientific article in that Is not split into columns and it does not have an abstract.

**Type of Documentation**

The citations in this article are again done in a professional way. The use of superscripts in this article helps to clear up any confusion about statements and/or to reference a website where information was gathered. For example:

For instance, if a highly lagged player shoots at a less lagged player and scores a hit, it can appear to the less lagged player that the lagged player has somehow "shot around a corner"10.

The superscript of a 10 refers the reader to the Footnotes section and explains “This is the phrase our user community has adopted to describe this inconsistency.” The same format is followed throughout the article.

**Type of Graphics**

In this article graphics are not used very heavily. There are screenshots of actual coding and diagrams of simple client and server interactions. Both of these types of graphics would not be of any use to anyone outside of the professional field of game design. The graphics are not labeled as Figures as the scientific article was and the screen grabs of code are not described in any large amount of detail. This shows that the intended audience must be of the similar profession as the author.

**Type of Language**

The language in the article is more jargon heavy than any of the three other articles analyzed. While the scientific article did contain many industry specific terms, it did allow for some scientists outside of the specific field to grasp the concepts. An example from this article of heavy, industry specific jargon follows:

In Half-Life, minimizing discrepancies between client and server in the prediction logic is accomplished by sharing the identical movement code for players in both the server-side game code and the client-side game code. These are the routines in the pm\_shared/ (which stands for "player movement shared") folder of the HL SDK. The input to the shared routines is encapsulated by the user command and a "from" player state. The output is the new player state after issuing the user command. The general algorithm on the client is as follows:[Screen grab of Code Here]

Terminology like this shows the author assumes the reader is in the same profession. Writing like this is on a high level similarly to the scientific article but catered to a much more specific audience.

**Point of View**

This article is of the second person. It uses words like “you”, “your”, and “yours”. For instance “Your game must behave well in this world. This discussion will give you a sense of some of the tradeoffs required to deliver a cutting-edge action experience on the Internet” uses the word “your” and “you”. This point of view is used throughout the article. It is in contrast to the scientific article because it was presenting data formulated by the author of the article. This article uses second person because using “we” or “us” would almost alienate people when it comes to professional writing for people of the same field.

**Indication of Theoretical Approach**

In this article the theoretical approach is to explain the necessary evil of lag compensation and how someone of the same professional field can understand how it works. It describes the benefits of lag compensation and exactly how and why it allows for a better gaming experience. Regarding the overall subject the author of this article has a positive disposition and is trying to use information that should already be known by the reader to persuade them.

**Indication of Methodology**

This professional article did not have any data collection like the scientific article did because it is for a different audience and sets out to accomplish something much different than the scientific article. The author uses industry specific jargon to explain lag compensation and its benefits to another professional in the same field.

**Review of Literature**

This article primarily uses secondary sources of information. It takes its information from other websites or the previous knowledge of the author. The superscripts link up with the footnote page and describe where any source of information was retrieved. The superscripts also link up to an explanation of any terms that would not necessarily be general knowledge to someone in the same field.

**Definition of Terms**

There is no explicit definition of terms in the article but if there are any phrases or ideas that come up that are not specifically related to the profession a superscript is provided which links up to the description of the terms or phrases. For instance, the sentence “If we encapsulated absolute state data in this fashion, we'd raise the motivation to hack the client even higher than it already is3” refers to a discussion on cheating can do and it is noted that it is “…beyond the scope of this paper”.

**Placement of Thesis**

The main argument for this professionally slanted piece of writing is in the Overview section of the paper. The overview doubles as an introduction and describes the purpose as follows:

This discussion will give you a sense of some of the tradeoffs required to deliver a cutting-edge action experience on the Internet. The discussion will provide some background on how client / server architectures work in many on-line action games. In addition, the discussion will show how predictive modeling can be used to mask the effects of latency. Finally, the discussion will describe a specific mechanism, lag compensation, for allowing the game to compensate for connection quality.

This gives a basic but detailed overview of what this piece of writing will cover. It is in contrast to the obvious thesis which is in the abstract of a scientific research based article.

**Type of Title**

The title, “Latency Compensating Methods in Client/Server In-game Protocol Design and Optimization”, is heavy on the jargon and gives a good overview of what the article is about if and only if you are someone in the profession. A standard, general audience member would not understand the point that is trying to put across. Again, this differs from the scientific article because this article is much more specific and unforgiving with the wording it uses.

**Organization of the Argument**

The argument of this article is give reasons as to why lag compensation is important to gaming. It is organized in a manner that works up to his final and most powerful point about why lag compensation is important in the conclusion. It builds up to a climax in a way that I have not observed in other writing.

**Type of Advance Organizer**

This article features a clickable table of contents as its advance organizer. This is an online article and therefore has the ability of being able to click a spot in the contents and skip to the section of most interest. Also the company logo “Valve” is in between the title and the introduction. This could be an identifier, in some cases, that this is an industry specific article and has little or no value to people outside of “Valve” or maybe just the gaming industry.

**Type of Page Layout and Design**

The page layout is very basic and ordered exactly as the table of contents expresses. It is almost in an essay format with bold headings followed by paragraphs. There is nothing exciting or drawing about the format because there does not have to be anything. If someone is reading this article is not because it drew them in, it is because they are specifically interested in it because of their profession.

**General Article (“’Call of Duty’ Players Say Lag is Ruining Online Gameplay”)**

In contrast to both scientific and professional audience slanted papers, the general article is what is marketed to the widest array of people. A general audience article is an article that is found in a publication or on a website that is frequented by an audience of no specific set of interests. The article titled above is found in The Huffington Post online periodical. Although it does deal with an idea that is foreign to a general audience it is presented in a way that general audiences can absorb. For this final segment of my audience analysis, I will once again go over the same criterion as before. Hopefully through the description of each of the criterion, a greater understanding of the differences/similarities in audience specificity of these types of articles can be gained.

**Introduction**

In this document there are no bold headings or labels to distinguish between any kinds of sections. The length of the article is extremely short in comparison to both the scientific and professional articles. The introduction to this article could be considered the title “’Call of Duty’ Players Say Lag is Ruining Online Gameplay”. The title explains the purpose of the article and main subject. Another section that could take place of a formal introduction is the first paragraph which states:

Gamers are already complaining about "Call of Duty: Advanced Warfare," which launched earlier this week, saying the title has lag issues that significantly impact the online multiplayer experience.

This single, short paragraph, while not explicitly labeled as an introduction could easily be labeled with a bold heading of Introduction. The article is too short to worry about separate headings. This article takes a statement from the title and explains it, then ends. It is the definition of a simple general audience article.

**Conclusion**

Again, there are not labeled sections but the final paragraph could stand in for a formal conclusion. The sentence is as follows “Despite complaints, "Call of Duty: Advanced Warfare" received generally positive scores on review aggregator Metacritic”. This final sentence contains the sentiment of the article by saying despite what was written in the article, the game is still critically acclaimed. There is nothing to summarize because the main idea of the article was a basic idea on one topic. The lack of in depth information identifies it as a general audience article.

**Subordination**

There are no hierarchal relations when it comes to organization. It simply states the title and explains what the players have said. Ends with a “conclusion” saying despite the lag the game still has a positive overall reception.

Grammatically, there are many subordinate conjunctions in the writing. An example from the article follows:

For example "Diablo 3" -- which is published by Blizzard, a subsidiary of the same holding company that owns Activision -- experienced such problems in May 2012 that a community manager for the official had to provide an update after the game's servers were overloaded.

The use of the word “after” in near the end of the sentence provides the necessary transition between the two ideas in the sentence.

**Type of Documentation**

There are no specific types of documentation accompanying the article but when referencing a website or fact there is an embedded hyperlink to the relevant website or information. For instance the sentence:

Gaming site [**Kotaku**](http://kotaku.com/the-pc-version-of-call-of-duty-launched-a-little-rough-1655224403) on Wednesday reported that players on the PC version of the game were experiencing "pings" of up to 800. This number refers to how quickly computers are able to communicate on a network and is **measured in milliseconds**.

The bold word and statement are stand ins for the actual hyperlinks but on The Huffington Post site a reader could click the links for relevant information related to where the information was obtained.

**Type of Graphics**

The graphics in this article are simple action shots from the Call of Duty game. They are not labeled in any specific way similar to the scientific article. The main purpose of these images is to draw attention and remind casual readers of the game if they do not know it by name.

**Type of Language**

The language used in the article is very casual and matter of fact. It is written in a way that makes it feel as if your “cool friend” is reporting something to you. An example would come from a paragraph where lag is being explained:

Think of it like playing a game of dodgeball, getting a kid out on the other side of the court, and having them unexpectedly bean you in the face with a ball when you turn your attention elsewhere. Then coach says *you* lost.

It is a very informal way of describing things but is useful in explaining a technical topic to a general audience. The professional and scientific article are exact opposites of this style.

**Point of View**

This article uses the third person point of view. It refers to “Gamers” and does not use any words like “I”, “us”, or “you”. Most news articles are written in the third person point of view because they are reporting on something not explaining personal experience or telling the reader something they should do. In comparison the scientific and professional articles used first person and second person points of view respectively.

**Indication of Theoretical Approach**

In all likelihood there was no theoretical approach besides explaining what gamers were exclaiming about. Articles like this one and most that are directed to a general audience are impartial to a certain point of view in one way or the other. This article simply reports the facts in a simple, easy to digest fashion. There were no underlying motives or a specific side the author was interested in pushing.

**Indication of Methodology**

The methodology for this article was simple interviews. Interviews obtained from gamers and companies. The author reached out to major gaming outlets like Kotaku and publishers like Activision. They took their comments and formatted them to fit the style of news article.

**Review of Literature**

This article does use primary sources there is a screenshot from a gamer (video was seen by author) who experienced the issue first hand. Some secondary sources include statistics from outside sources like the technology website Kotaku.

**Definition of Terms**

One of the main features of general audience articles like this one is that no definitions are explicitly needed. There is a paragraph in the article that explains what lag is, it states:

Think of it like playing a game of dodgeball, getting a kid out on the other side of the court, and having them unexpectedly bean you in the face with a ball when you turn your attention elsewhere. Then coach says *you* lost.

Something like this is all that is provided. There are no other technical terms or advanced topics that would need clarification. This is another feature that identifies a general audience article like this one.

**Placement of Thesis**

The main argument or thesis of this article would be the title. The title “”Call of Duty’ Players Say Lag is Ruining Online Gameplay” explains the main idea of the article and by reading it the reader knows exactly what is going to come in the following article.

**Type of Title**

The title “”Call of Duty’ Players Say Lag is Ruining Online Gameplay” is simple title but functions as the introduction, thesis and title. It relates to the audience it is going for because of its simplicity yet depth of information. A general audience does not want to read a title, thesis and introduction just to get the main idea of the article, so this type of title becomes a major identifier for general audience articles.

**Organization of the Argument**

There is not an argument in this article. This article states facts and is a reported news article for a general audience. There is no agenda or purpose besides that of informing. Again, this is in stark contrast to the other two articles mentioned above.

**Type of Advance Organizer**

Something that could be considered a type of advance organizer for this article would be the label “The Huffington Post | By Damon Beres” that is placed below the title and before the “introduction” in the first paragraph. In an article like this it is much more difficult to identify an advance organizer.

**Type of Page Layout and Design**

The layout of the page is simple. Bolded title then a few paragraphs with no labeled sections to describe the title more. It is written to report a finding in a quick concise manner to appeal to the shorter attention spans that a general audience offers.

**Conclusion**

In conclusion, the audiences for articles of the scientific, professional and general audiences differ in many ways. Each criterion above gives reasons and examples of how each type of article differs from the other. In a simple sentence the main differences in audience can be determined by asking the questions “Who is this article written for?”, “Is the language used something only someone in that industry could understand?” and “Is the article simple, short and general enough to be for everyone”? These questions alone can identify the audience but along with the criterion from above a more detailed examination can take place.