



University of Castilla - La Mancha

# Applying Thematic Analysis to define an Awareness Interpretation for Collaborative Computer Games – Survey Questions

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Technical Report #DIAB-15-02-1

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Context – Collaborative computer games have evolved from single-player to massively multiplayer awareness-demanding games, usually involving collaboration to achieve team goals. As a consequence of such evolution, the players of these games should be provided with awareness information that make them able to perform collaborative tasks within their teams. Objective – The objective of this work is the analysis of the current awareness interpretations in order to develop development of an awareness interpretation gathering the awareness needs of such games. In addition, the developed interpretation must be integrated into a game development process. Method – This analysis has been carried out by means of a step-by-step Thematic Synthesis of current interpretations which led us to obtain the most relevant awareness elements present in current interpretation. Moreover, the developed awareness interpretation was empirically evaluated by means of several surveys aimed at assess whether the implementation of the interpretation's elements on a game would improve the players enjoyment. Results – The Thematic Synthesis analysis concluded that none of the current awareness interpretations can deal properly with collaborative computer games, specifically due to the collaboration and social & group dynamics. However, this Thematic Synthesis led us to coin Gamespace Awareness, a new awareness interpretation based on a unification of the previously analyzed awareness interpretations which is suitable for collaborative computer games. Furthermore, the interpretation was positively evaluated for two games, namely a first person shooter and real-time strategy game. Conclusions – Gamespace Awareness gathers all the awareness elements that a collaborative computer game could have, making it possible to identify the awareness requirements of such games right from the very beginning.

## SECOND SURVEY QUESTIONS

In this appendix, the questions of the second survey given to the participants are shown. Originally, the whole surveys were in Spanish for the sake of clarity. Note that the survey started with an eliminatory question asking whether they had previous experience of each game. The remaining questions had to be answered according to the following scale:

- It will greatly improve my game enjoyment
- It will improve my game enjoyment
- It will slightly improve my game enjoyment
- It will not improve my game enjoyment

### 1. Age of Empires Survey

#### Page 1

In the next survey you have to answer whether having knowledge about some issues would improve your gaming enjoyment (i.e. the game would be easier to play, you would like to play longer, you would get a better score, etc.) or not. Note that the game may not have some of the functionalities that the questions deal with. In that case, your answer will be according to whether or not your game enjoyment would have improved had the game had that functionality.

Do you have expertise as an Age of Empires player?

#### **When playing Age of Empires, knowing:**

Is there someone available to start a game?

Who controls each civilization?

Who is attacking / building / evolving...?

What are the other players doing? (building, attacking, evolving...)

What does each player aim to achieve with what they are doing?

What map object are they manipulating? (city center, barracks, wonder...)

What is the status of the other players' troops? (health, magic...)

What abilities do other players' troops have? (heal, attack, convert)

What knowledge do the other players have about the map?

What are the other players seeing?

Where in the map are the other players?

Where in the map are the other players looking at?

Where in the map can their troops' gunfire reach?

Where is an object (treasure, flag ...)? How far is that object?

Where can the other players' troops move to?

What device and buttons / key do I have to use?

**will increase my enjoyment when playing the game.**

Page 2

**When playing Age of Empires, knowing:**

How did the last attack happen?

How did the city center / headquarters / church... evolve?

When did the latest attacks happen? How often did they happen?

Who did I play before? When did I do it?

Where did the other players' troops pass through?

Where was the treasure / flag...?

What have the other players been doing? (building, attacking, evolving...)

**will increase my enjoyment when playing the game.**

Page 3

**When playing Age of Empires, knowing:**

When will we perform the next joint attack? How often will they be performed?

Who will be the next to attack?

Where will the other players' troops be?

Where will the next treasure / flag... appear?

What will the other players do next? (attack, build, evolve...)

What will the status of my base / barracks / stronghold be if I make a certain evolution?

What skills will I have if I evolve some tech tree branch? (attack, construction, economy...)

What knowledge about the map will I have if I develop a certain ability?

**will increase my enjoyment when playing the game.**

Page 4

**When playing Age of Empires, knowing:**

Who is on my team?

Who is on the other teams?

What team do I belong to?

What are my privileges within my group? (create games, kick disruptive players out...)

What are the other team members' privileges?

What is my relationship with others? (allies, enemies, neutrals...)

What personal information do the others have of me? (real name, photo, email...)

Is there any structure within my team? (leader, administrator, file members...)

What is the goal of my team? (defeat rivals, build wonder, destroy city centers...)

How do I communicate with my team members? (voice chat, text chat, asynchronous messages, I cannot communicate...)

How do I communicate with the other teams' members?

**will increase my enjoyment when playing the game.**

## **2. Call of Duty Survey**

### Page 1

In this survey you have to answer whether having knowledge of certain issues would or would not improve your game enjoyment (i.e. the game would be easier to play, you would like to play longer, you would get a better score, etc.). Note that the game may not have some of the functionalities that the questions deal with. Your answer will then depend on whether your game enjoyment would have improved had the game had that functionality.

Do you have expertise as a Call of Duty player?

#### **When playing Call of Duty, knowing:**

Is there someone available to start a game?

Who controls each character?

Who is firing / reloading / hidden...?

What are the other players doing? (shooting, running, hiding...)

What each player aims to achieve what they are doing it with?

What object in the scenario are they manipulating? (turret, special weapon...)

What is the status of the other players? (health, ammo...)

What abilities do the other players have? (sniper, commando, stealth...)

What knowledge do the other players have about the scenario?

What are the other players seeing or hearing?

Where in the scenario are the other players?

Where in the scenario are the other players looking at?

How far in the scenario can the other players see?

Where can the other players' gunfire reach?

Where is an object (weapon, ammo, turret...) How far is that object?

Where can the other players move to?

What device and buttons / key do I have to use?

**will increase my enjoyment when playing the game.**

### Page 2

#### **When playing Call of Duty, knowing:**

How did some player die?

How did a weapon evolve? (fire range, power, rate...)

When did some player die? How often did it happen?

Who did I play with before? When did I do it?

Where did the other players pass through?

Where was the gun / ammo / shelter...?

What have the other players been doing? (attacking, hiding, running away...)

**will increase my enjoyment when playing the game.**

Page 3

**When playing Call of Duty, knowing:**

When will we perform the next joint attack? How often will they be performed?

Who will be the next to attack?

Where will the other players be?

Where will the next weapon / ammo / medicine... appear?

What will the other players do next? (attack, hide, flee...)

What will the status of my weapon be if I upgrade it?

What skills will I have if I evolve my current ones? (speed, aim, stealth...)

What knowledge about the scenario will I have if I develop a certain ability?

**will increase my enjoyment when playing the game.**

Page 4

**When playing Call of Duty, knowing.**

Who is in my team?

Who belongs to the other teams?

What team do I belong to?

What are my privileges within my group? (create games, kick disruptive players out...)

What are the other team member's privileges?

What is the relationship I have with others? (allies, enemies, civil...)

What personal information do the others have of me? (real name, photo, email...)

Is there any structure within my team? (leader, administrator, file members...)

What is the goal of my team? (kill rivals, capture the flag...)

How do I communicate with my team members? (voice chat, text chat, asynchronous messages, I cannot communicate...)

How do I communicate with the other teams' members?

**will increase my enjoyment when playing the game.**