Understanding Emotions in FIFA 07

TELLING A DIFFERENT STORY EVERY 90 MINUTES

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SUMMARY

Understanding emotions is a key component for the success of the interactive entertainment media. Players should be carried on an emotional rollercoaster ranging from the lowest shame to the highest glory. A "flat", unemotional, game will create a big hole in the suspension of disbelief, drastically reducing users' engagement; interpreting or directing the wrong emotions, might be worse. The movie industry does it pretty well, having the advantage of the user being just a spectator; the gaming industry has an increase in dimensionality since the user is the cause and effect of his/her own actions.

This paper answers why emotions play such an important role in a social sport simulation title like FIFA 07. It also presents how emotions are understood and enhanced in FIFA 07 for the current generation consoles. And it explains how a different story can be told on every 90-minute game of this extremely emotional and passionate sport, detailing all the different components that the designers subtly used to carry players through the emotional rollercoaster from shame to glory.

INTRODUCTION

Imagine a game where you need to kill a monster: you face it and kill it. Without any context, this sounds absolutely flat as the sentence. Now, if the monster was your friend, betrayed you, killed a beloved member of your family, and, as you are fed by the sense of revenge, you are going to face him in the woods on a stormy night, even though the silence, lack of light, and thunderstorms scare you to death because of bad childhood experiences. It sounds a little different. Why? Because there is something personal in the latter scenario, it was directed and driven towards building an emotional context that affects and engages you in a personal way.

Understanding, driving and enhancing emotions in games is a key factor that we, as game creators, should pay attention to if we want to improve player engagement and deliver an awesome experience for our customers. An experience full of emotions, making the player want to laugh and cry. Making him/her to feel a personal connection with the virtual world and characters that we create.

Sport simulation games are not any different. I've played EA FIFA games since I was a teenager. I had good emotional experiences when I was playing with my real world team following real world fixtures or to revenge a real world loss. But the best experiences were enjoyed when getting together with several friends, playing mini tournaments, yelling, laughing, and suffering according to match actions and final scores. All emotional experiences were driven by my mind, my passion for my team, and by the social gaming aspect of the game. No real overwhelming support and enhancements from the game itself.

This is where we have a lot to work on. If we understand and enhance the emotions of playing a match, and we tell an emotional story every single match, then we would have a huge improvement.

> **Presentation Area**
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> **Sebastian Enrique** (Tigre fan) was the Software Engineer Lead for Presentation in FIFA 07 CG, but, what is Presentation exactly?
>
> Presentation is the glue that sticks all the different game elements together during gameplay, acting as the director of the game. Cameras, replays, highlights, HUD, NIS, and audio, are some of the subsystems that fall under the Presentation umbrella.
>
> Some of the new features that Presentation contributed to FIFA 07 CG were:
>
> - Shortcut to Instant Replay after a goal or offside
> - User controlled change of focus during Instant Replay
> - Player Skills Graph in the HUD during gameplay
> - Ticker with real life data during gameplay
> - Context sensitive radar fading during gameplay
> - Context sensitive NIS skip-ability to enhance social gaming
> - NIS Post Effects to enhance emotions
> - Emotional Engine to understand emotions and support NIS and audio subsystems
> - Clear differentiation between home and away crowds regarding audio
> - New in-game highlights: saves and successful dekes
> - Showing last relevant highlight during a goal kick or corner kick out of play
> - In-game kick taker chooser during free kicks and corner kicks

EMOTIONAL FOOTBALL

Football (soccer for North America) is an extremely passionate sport. "*Football is not just a matter of life and death: it's much more important than that*" is a famous quote often attributed to Bill Shankly[1] that perfectly describes how fans feel about the sport. Although occasional spectators are not so drastically driven for football like the hardcore counterpart, both share the same experience during every match: an emotional rollercoaster ranging from the lowest shame to the highest glory. It doesn't matter if you are a fan of a top worldwide recognized team or of a small second

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[1] Bill Shankly is a famous former manager of Liverpool F.C.

division club. The passion is in your heart and you feel, although it might be in different situations, the same kind of emotions.

Let's illustrate the emotional rollercoaster with a real world example: AC Milan (Italy) vs. Liverpool (England) in the 2005 UEFA Champions League final. Paolo Maldini from AC Milan scored at the very first minute and Hernan Crespo increased the difference scoring two more goals before the end of half-time. AC Milan was experiencing a very high glory moment, believing that no one could come back from that difference, and more so, because they were playing really good football. But in the second period, 5 minutes were enough for an amazing Liverpool burst for an unexpected equalizer, pushing the game towards penalty shootouts. The hearts of AC Milan fans' stopped and finally Liverpool won the cup after its keeper saved two penalties, leading Liverpool from the hardest of shame to unbelievable glory.

Highly emotional stories like this one can be found on a day to day basis in the world of football.

Our job when working on a sport simulation title is to understand and support the emotions during the match. To show players' emotions, to show crowd emotions, and to emphasize and enhance the user experience regarding those emotions.

EMOTIONAL FIFA 07

During preproduction brainstorming sessions, and with Joe Booth's direction, we understood the key role that passion and emotions play in football and we came up with a motto to emphasize them:

"Total Football 2.0: My Club, through Glory & Shame"

The Total Football 2.0 was to indicate that we were going to work on FIFA 06 foundations for the football authenticity. The My Club aspect was to emphasize the passion, ownership, responsibility, and fate of your actions through your club—especially your real club in Interactive Leagues[2]-, living and going through the happiest and shameful moments, and the in-betweens.

We believe that understanding and supporting the right emotions during gameplay affects:

- **Engagement**: Users will feel a closer connection to the game and the team they support, feeling and sharing the emotions that the game enhance.

- **Longevity**: Linked with the previous point, an emotionless experience will quickly cut the longevity of the game; and emotional experience will keep users playing for longer hours.

- **Loyalty**: In the long term, final customers will remain loyal to the game that supports their emotions and engage them to continue playing game after game.

- **Passion**: Supporting football passion with emotional enhancers will bring users the passion back to the EA FIFA franchise.

- **Variety**: Understanding and supporting emotions according to match actions will offer a different experience on every single match telling a different story every 90 minutes.

Upon agreement and acknowledgment of the importance of improving the emotional aspect of EA FIFA videogames, we asked the question: what do we need to do as game designers to support it? Resulting in the following items:

a) Understand what are the actions and events that cause emotional changes in the users.

b) Understand what are the elements that we have in our hands to enhance those emotions with the current technology; and how we use them to express the emotions we want the users to feel.

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[2] EA Sports Interactive Leagues is the new FIFA 07 online feature where you control your club's destiny as your online games coincide with real-world match-ups and schedules.

c) Design the system that given the actions and events, tracks the emotions, and reacts accordingly.

UNDERSTANDING EMOTIONS AND ITS CHANGES

In order to understand what the emotions at a given moment of a football match are, and what are the actions and events that cause an emotional change, you need to know the domain. Both the Presentation producer and I are football fans and we have lived hundreds of our teams' football matches, all the while suffering and smiling an uncountable amount of times.

We identified that during the 90 minutes of a match:

- A football fan can travel through a broad range of emotions, from the lowest shame to the highest glory.

- The emotions for the home and away teams are different.

- The journey through those emotions is not smooth. It's full of bumps, highs and lows, with sudden and abrupt changes. For that reason we use the term *emotional rollercoaster*.

- There is an overall feeling and trend of emotions in that rollercoaster, which is slowly changing according to match actions, depending on the score, and how well the team is doing. We call this the *macro trend*.

- In the macro trend, you might be, for example, frustrated or with hope, regardless of the immediate action that you are performing. This immediate action temporally affects the current emotional state, but macro emotional trend persists through time unless an extremely significant event happens.

- That extremely significant event is a **goal**. It affects and changes the macro trend for both teams.

- The macro trend and the emotion also changes at the end of the match and at the start of penalty shootouts (it might be a relief or a shame).

- Current emotion is affected by in-game achievements and frustrations. You feel achievement when you execute a good play, constantly control the ball in the attacking 3rd, or perform a fantastic deke. Whereas you feel frustration when you cannot recover possession of the ball, all your shots are far misses, or you are being repeatedly caught off-side. We call these *microchallenges*.

- In platform games, to jump is an action or move that you can execute, but the real microchallenge is to *jump three times in a row over the head of three different enemies*, and you are rewarded with an increase in score or energy. In a football game, to pass is an action or move that you can execute, but the real microchallenge is to *lob a ball to the wingman, fake the defender, and cross it for a header that results at least in a close miss*. Players should be rewarded or punished by achieving or failing to commit microchallenges.

- Microchallenges do not change the macro trend, but rather, they are combined with it to decide what the current emotion is.

- The identified events and actions conforming microchallenges, which affect the current emotion in a positive or negative way, that we want to pay attention to are:

  1. In-game team chemistry

  2. Fouls (yellow and red cards, offsides, injuries, penalty kicks)

  3. Missed shots (penalty kicks, close and wide shots, post and crossbars, etc)

  4. Corner kicks

  5. Possession (trapping and turnovers, passing, plus ball location)

6. Saves (easy, medium, hard, etc)

7. Breakaways

For many of them we want to consider current score and time. It is not the same when you do a bad pass winning 3-0 at the middle of the game, or when you missed a good opportunity for an equalizer at the 90th minute.

It is important to note that the starting emotions depend on which team is home, and which one is away, their overall quality, and the short term past history of played games.

UNDERSTANDING SUPPORTING ELEMENTS

The three basic areas that we found out in FIFA 07 the game designer counts with to develop, enhance and build emotions from are audio, visuals, and gameplay elements—however, it is important to note that there are many different ways to enhance/create/support emotions in every domain-. It is just a matter of knowing what the technological restrictions are and picking the right combination of elements to produce the best results for your game.

It is not an easy task, since most of the supporting elements are not directly noticed by the customers if they work properly, but any minor flaw completely breaks the suspension of disbelief.
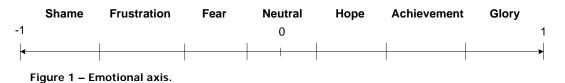
AUDIO

In a football game like FIFA 07, we can divide the audio into three main sub-areas: crowd, speech (commentators), and sound effects.

Crowd is probably the most important audio element that we can use from the three sub-areas. It is constantly running in the background and real football crowd reactions are a perfect indicator of emotions. We can play with crowd bed level of noise, silence, and volume (crowd reactions' surpassing commentators' volume for example). We can use different samples to express a happy crowd, a frustrated one, and any other variations that we find useful. Special reactions like booing, whistling, cheering, chanting, and hecklers in the right situations would add a lot of depth to emotions' enhancement. Crowd is the right companion to the player during the rollercoaster journey, especially to reward or punish the outcome of microchallenges. It can even be localized, for example, a crowd in England is different than a South American one, and specialized (i.e. chants, reactions) to support not only emotions, but authenticity.

Speech is another element that can be used to enhance emotions. The level of excitement in commentators' voices, frequency of comments to demonstrate a boring or a back and forth game, and specific scripts can support emotions and microchallenges.

Sound effects are probably too subtle but not less powerful. A highly noticeable post sound effect after hitting a post in the last minute of the game that prevented the player from the equalizer is a strong supporter of the frustration of the miss. Thunders sound effect during an overcast match when a team is playing badly is another supporting element to the emotions of the game. These are just a few examples of subtle sound effects elements that can be used to play with to support player emotions.

In FIFA 07 CG we decided to concentrate on just the crowd reactions, and leave speech and sound effects for future iterations of the game.

Shame	Frustration	Fear	Neutral	Hope	Achievement	Glory

-1   0   1

Figure 1 – Emotional axis.

VISUALS

The interesting problem to solve when considering visuals as an emotional enhancer is how and what to use without detracting the simulation aspect of the game.

We identified that playing with the camera during NIS's (non-interactive sequences) was a powerful tool. Close-ups, different camera angles (i.e. from the top, focusing on faces, for shameful moments; from the bottom, focusing on faces, for glorious moments), animated depth of field, and left to right and top to bottom movements were some of the elements that we counted for. Those, combined with player poses and emotional-charged animations (context-sensitive), and special shots to show the contrast between a team in glory and a team in shame were a must have.

On the rendering side, we counted with Post Effects elements to apply during NIS's, like tint, saturation, contrast, vignette, luminance, and bloom. Finding the right combination depending on the emotional state that we wanted to support was a task for the art director -Jenny Freeman-.

The difficult job is to represent the right emotions showing the right animations and using the right effects during the right moments.

Other areas that we didn't have time to work on were replays (i.e. camera usage and context sensitive replays), in-game animations (to show players frustration or happiness during gameplay), and weather.

GAMEPLAY

From gameplay we need to understand what is happening on the pitch to trigger the right NIS's at the right moments, and to avoid triggering NIS's when we shouldn't be showing anything. In this way, we would be telling a story and supporting player emotions during the 90 minute match.

The other element that we can play with, during social gaming—at least two players playing in opposite teams—is to avoid one of the sides to skip the NIS's. For example, if the away team is winning 2-0, and has a throw-in, the NIS will show a player wasting time and taking it really easy. The home team is desperate to continue playing but he can not skip the sequence, the away team is the only one allowed to move the game forward. Therefore, the control is on the away team and we support the desperation and frustration of the home team.

We can potentially affect AI through player attributes: a player prone to break under pressure, when the crowd is whistling because it's unhappy with in-game situations, can have a bigger error curve when taking a shot. Players with the attribute of showing off when being under pressure, can have the opposite effect.

DESIGNING THE EMOTIONAL SYSTEM

What is it?

- A system that analyzes events on the pitch to determine the home and away teams' emotions at any given moment during gameplay.

- A system that enhances the user experience by directing presentation output and gameplay modifiers according to the detected emotion for each team.

What is it not?

- A predictable system where the end result is seen as decided by the AI in place of controlled by user actions on the pitch.

- A system that changes gameplay attributes forcing users to play in a certain way.

- A complex system that causes more confusion than experience enhancements.

We have identified the events and actions that cause changes in player emotions and we know what elements we want to use to enhance them. The question is how can we track the emotions in a simple system friendly way? How would you do it?

A big context manager that directs audio, commentaries, NIS's, and gameplay is the first thing that comes to mind. But it is too big in scope, it would take too much time to implement and tweak it, and the confidence that we can deliver a working feature using this method is low. We should ask ourselves what is the output that we want on the different game areas and attack the problem from there.

The answer is to do an emotional engine as a supporting feature for the other systems. The emotional engine listens for AI events to decide the current emotional state for each team. We have focused on crowd, and designed state machines that takes AI events, current game state, and current emotional state as inputs to produce the audio outputs that supports our Social Gaming motto. The NIS system dictates what type of NIS to play according to the emotional state.

REPRESENTATION OF EMOTIONS

The emotional state is internally represented in the range [-1, 1] (see Figure 1), dividing that range in discrete values to represent Shame, Frustration, Fear, Neutral, Hope, Achievement, and Glory emotional states, per team. This gives us enough granularity to keep it simple and to express enough emotions to satisfy our needs.

Where the discrete division stands on the axis depends on the type of match and the teams. We use four different scales: a Regular game, a Derby, a Stronger scale, and a Weaker scale. Therefore, the home and away teams might have the same continuous value (let's say 0.6), but it might represent two different emotions (hope for the home team; achievement for the away team).

A Derby is a game where both teams are all-time rivals of each other –usually due to proximity-, and is often considered and felt in real life as a different game, it doesn't matter the current status of each team. A Derby match in real world is, for example, AC Milan vs. Inter, or Boca Juniors vs. River Plate. In a Derby situation in FIFA 07, both teams use the Derby scale, and it is the scale where Shame and Glory are closer to each other.

When we are not in a derby match, we use a parameter from the database called International Prestige to decide which scales to use. If the international prestige difference d is less or equal a threshold t, we use a Regular scale. If d is greater than t, the team with greater international prestige uses a Stronger scale, while the other team uses a Weaker scale.

See Figure 2 for a comparative graph of scales' differences.

The initial emotional value depends on the scale and the home/away condition.

Besides having a current emotional value and a scale, each team has minimum and maximum emotional values that it can reach depending on the current score. As an example, if you are a well known top team playing a second division team, beating them 1-0, it doesn't matter how well you are playing, you cannot be in Glory, because a victory is expected, at most you would be in Achievement. When you score or the match ends, those minimum and maximum values, together with the current emotional value, are reset depending on the goal difference and the time (it's different if you score in the first five minutes, than if you do it in the middle of the game, or in the last minute), following the concept of *macro trend* that we introduced in a previous section of this paper.
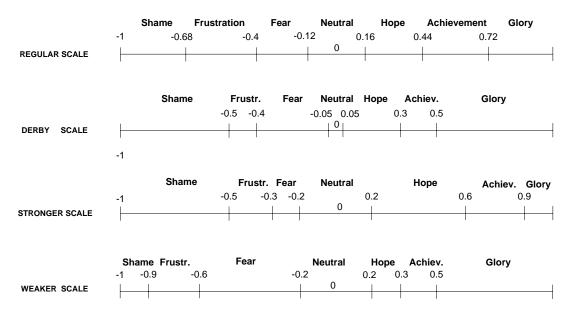
REGULAR SCALE	Shame	Frustration	Fear	Neutral	Hope	Achievement	Glory
	-0.68	-0.4	-0.12	0	0.16	0.44	0.72

-1

DERBY SCALE	Shame	Frustr.	Fear	Neutral	Hope	Achiev.	Glory
	-0.5	-0.4		-0.05	0.05	0.3	0.5

-1

STRONGER SCALE	Shame	Frustr.	Fear	Neutral	Hope	Achiev.	Glory
	-0.5	-0.3	-0.2	0	0.2	0.6	0.9

-1

WEAKER SCALE	Shame	Frustr.	Fear	Neutral	Hope	Achiev.	Glory
-1	-0.9	-0.6		-0.2	0.2	0.3	0.5

Figure 2 - Emotional Scales. Values are not necessary the ones used in the game, they are just representative.

CHANGE OF EMOTIONS

The change of the current emotion per team is basically an event based system where the emotional value is adjusted—positively or negatively—depending on the event and other event specific parameters, but always clamping it to the current minimum and maximum bounds. In this way, we track *microchallenges* reaction as a combination of single events, keeping always the macro trend.

When a team emotion changed in discrete value, the emotion is broadcasted so every other system knows about it.

The specific events that we track in FIFA 07 CG are:

- Momentum change (team chemistry), caused by an AI Context Manager
- Foul (might be a PK, tracks cards as well)
- Offside
- Injury
- Missed Shot
- Corner Kick
- Goal (adjusts the macro trend besides current emotion)
- Hit in the post or crossbar
- Trap
- Save
- Turnover
- Breakaway
- End of half
- Start of half

As an example, these are the rules that are processed when a foul is called:

```
PROCESS_FOUL_CALLED ()
{
    1. If Foul resulted in first yellow card, increment emotional value for
       foulee by 0.05.
    2. If Foul resulted in fouler sent off (2nd yellow card, or red card),
       increment emotional value for foulee by 0.25, and decrement emotional
       value for fouler by 0.25.
    3. If Foul resulted in a Penalty Kick (this is independent of the previous
       two rules), increment emotional value for the foulee by 0.20, decrement
       the emotional value for the fouler by 0.20.
    4. Clamp the emotional values for both teams to the corresponding minimum and
       maximum values.
}
```

What these simple rules are telling us is that a regular foul is not affecting player emotions; that a foul resulting in a card is making the foulee a little happier; and that a player sent off is making the foulee a lot happier and the fouler a lot sadder, same for a penalty kick. A penalty kick combined with a red card is producing a huge emotional change.
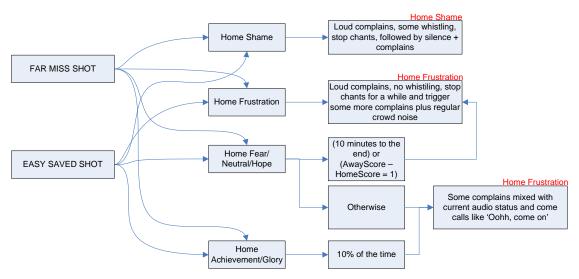
The foul event combined with others—player missing the penalty kick, wasting the free kick by missing the shot, losing the ball after the free kick, etc.—successfully tracks the emotional changes caused by succeeded or failed microchallenges.
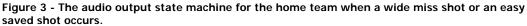
EXPRESSING EMOTIONS

As mentioned before, the different subsystems take the emotional value per team to decide what the output it should produce is. We concentrated on Audio and NIS's, but this can be used to affect gameplay and any other in-game element.

AUDIO

Independently of the emotional engine, a small sub-feature that engages and emotionally prepares the user for the emotional in-game experience is to reproduce chants related to the team selected in the user profile in between music tracks. This can potentially be integrated in the future with a larger scale emotional engine that tracks not only in-game situations but history of past games.

Figure 3 - The audio output state machine for the home team when a wide miss shot or an easy saved shot occurs.

For in-game crowd reactions, we have designed several state machines that mimic different microchallenges and using the emotional engine values output different samples according to what we understand the user should be feeling, enhancing his emotions.

Figure 3 illustrates what we understand for a frustrated crowd when a far miss shot or easy saved shot occurred. One possible path is that a *Far Miss Shot* AI event for the home team occurred, if the home team is currently in a *Frustration* emotional state, the audio system will play loud complain samples, no whistling at all, will stop playing chants for a while if there was any, replacing them for complains (hecklers) over a regular volume crowd bed noise. In this case we want the home user to feel frustration (indicated in red). If the home team was in *Achievement* or *Glory*, just with a probability of 10% some complain samples will be played, indicating a partially frustrated crowd for the current shot, but overall they continue being in the achievement/glory macro trend. You can easily follow the other possible paths using the same logic.

A more complex example that does not directly use the emotional engine is the *Ole* (see Figure 4). It assumes that if you are winning for 3 or more goals you already are at least in *Achievement*. It happens when the home team is winning for the specified goal difference, and after the 4th consecutive pass in the non-attacking 3rd part of the pitch. First you will hear shy (low volume) "Ole's", and eventually all the stadium will be yelling "Ole's" on each successful pass. When you lose possession, claps samples will be played.

Besides being an emotional enhancer, the *Ole* feature has a direct impact in gameplay during social gaming: If you are winning against a friend, you want to pass the ball to cause the "Ole's" to taunt him/her, and your friend wants to foul you as soon as possible to avoid the shame.

The *Ole* is something that works when the home team is the one winning. If the away team is doing the same, you would probably hear silence, booing, or whistling; clearly differentiating the home from the away crowd reaction.

We have designed plenty of state machines both for the home and away crowds to enhance different emotional states for different events and microchallenges.

I need to credit Steve Crowhurst and Terry Calico for the great work they did implementing these audio features and filling the gaps.
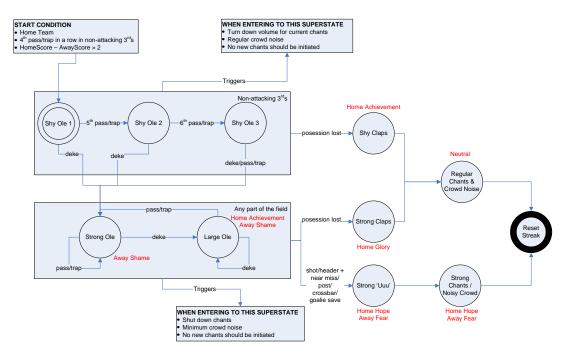

Figure 4 - The audio *Ole* state machine.

Figure 5 - Goal celebration examples. From left to right: frustrated; generic big; team glory; team shame.

NIS

Similar to the Audio system, the NIS system uses the emotional engine values plus the game state to dictate what NIS to play (if any). And this is key for supporting the user experience and telling a story during gameplay. As an example, if you are losing by 1 goal, with 5 minutes remaining, having a throw-in, you don't want to see any NIS, you just want to continue playing; displaying an NIS will detract from the experience. If the throw-in is for the opposite team, an NIS will be displayed showing the opposite player wasting time, enhancing your desperation and the opposition take-it-easy moment.

Knowing that almost every out of play results in a chance to display an NIS, we designed a new triggering logic taking into account the emotional engine values and game state. After the triggering logic, and once it was decided that an NIS should be played, the emotional engine is used as well to provide the NIS a context of what NIS to play.

Let's take for example a *Goal* NIS. We divided the output into:

- *Frustrated Goal Celebration*: occurs when the scorer team is in *Shame* or *Frustration*, the output is a player coming back to his side of the pitch not really celebrating because they are in shame or frustrated for the overall performance.

- *Regular Goal Celebration*: occurs when the scoring team is in *Fear* or *Neutral*, it is a lonely regular goal celebration; exciting for being a goal, but not that much.

- *Star Celebration*: occurs when the scoring team is in *Hope* or *Achievement*, and we have a specific star player celebration, they are big celebrations but player-specific.

- *Generic Big Celebration*: occurs when the scoring team is in *Hope* or *Achievement*, and we don't have player-specific celebration, it is a big celebration because it was an important goal.

- *Team Glory Celebration*: occurs when the scoring team is in *Glory*, and the team who scored is user controlled, resulting in an extremely excited celebration; in general involving several players.

- *Team Shame Animation*: occurs when the scoring team is in *Glory*, and the team who scored is CPU controlled, they main focus of the NIS is on players of the team who conceded the goal, suffering an "on the floor" the shameful moment.

See Figure 5 for screenshots of goal celebrations.

On the animation side, we carefully selected mocap data—and captured new ones—to emphasize the different emotions that we wanted to support. We wanted to emphasize the contrast between the glory and shameful moments. You can see in some situations, in the same NIS, players celebrating and the opposite players crying in the background, or vice versa. Besides that, our animator, Peter Meynell, did an awesome job working with the cameras and angles to enhance even more the emotions we were trying to emphasize. Several screenshots of different in-game situations can be seen in Figure 6.

Figure 7 represents the NIS's displayed in a match, showing how a story is being told.

The emotional values were also directly used to activate Post Effects (contrast, saturation, luminance, tint, vignette, bloom) on top of each NIS that is being played. The Art Director, Jenny

Freeman, specified different Post Effects values for each one of the seven emotions and all weather conditions. If you are in shame, a vignette plus sad colors will be shown, if you are in glory, shiny colors will be noticeable (refer to Figure 5 to see this differences).

CONCLUSION

It was not an easy task but we are proud of the output of the system that we delivered. Of course there are several issues that we would like to improve for future iterations, but I can say that it's the first time that I really feel that NIS's and Audio are really supporting what is happening on the pitch and enhancing my emotions, and not unconnected to the gameplay experience as I felt in previous games of the franchise. I hope that you feel the same when you play the game.

Using the NIS's and Audio as elements, a story is being told every 90-minutes. A story that shows the frustrations and achievements, the glory and the shameful moments, and that surprises me every single game I play.

We finally delivered a successful emotional system to engage players and support their emotions, thanks to the understanding, experience and the knowledge of the domain, and a simple method to track the emotions and output them.

As a takeaway, I hope that you have learned or refreshed your understanding about why emotions play such an important role in game design and development. And I also hope our experience and method be useful for you, and that you improve it to continue delivering games with a high engagement from the emotional side.

I hope this article is inspirational for game designers. The future of sports simulation titles is to continue working on the emotional aspects and improve them for in-game situations combining it with players attributes to show in-game reactions and affect gameplay accordingly.

Any feedback and discussions would be more than appreciated.

Figure 6 - Screenshots of NIS's triggered in-game, examples to notice Post Effects and emotional animations.
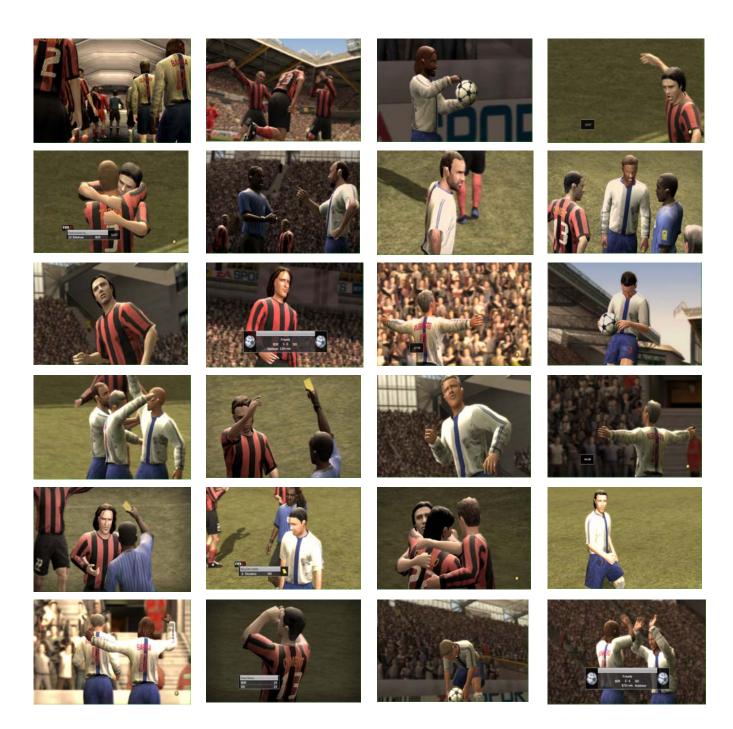
Figure 7 - Screenshots of NIS's triggered in a game, the away team won 4-2; The story is in chronological order from left to right and top to bottom.