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# Finding Moments of Play at Work

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**Abstract**

In this position paper, we propose that an important consideration for applying gamification within the enterprise is identifying the appropriate time for manifesting game elements into the work context – the “moment of play.” We reflect on our experiences with gamification projects within an enterprise. We call for further research into understanding moments of play in community, team, and individual enterprise experiences, notably synchronous team experiences.

**Keywords**

Gamification, game design

**Introduction**

Gamification – the use of game elements in non-game systems to improve user experience – has the opportunity to transform how employees work inside the enterprise. For example, Microsoft has explored how game elements can transform the experience of popular corporate tools like Office [1] and software development [7]. Seriosity’s Attent applies game elements to address information overload in corporate e-mail [9].

Well-designed games can provide playful experiences. But the use of game elements in non-game systems may not lead to a playful experience that could provide opportunities to think and act creatively [2]. The same concern can be raised for gamification in the enterprise. Employees are evaluated on how they perform their

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job, and “playful” activities might be frowned upon by employers. Gamification in the enterprise could be justified as a better user experience for data collection to solve work-related problems, i.e. “Games for a Purpose” [11]. So, *when* can we gamify work in the first place?

Employees are not always engaged in pure work all the time. There are times when they might momentarily distract themselves, such as by socializing or web surfing. We propose that an important consideration for applying gamification within the enterprise is finding such times, and focusing on those that are acceptable to an organization. These are opportunities for a “moment of play” - the appropriate time for game elements to manifest in the work context. In the following sections, we examine moments of play in several past gamification projects in IBM, and call for further research into understanding moments of play in community, team, and individual enterprise experiences. Our examination includes asynchronous as well as synchronous experiences. We highlight synchronous experiences as particularly challenging for finding the moment of play. Implementing synchronous gamification elements is challenging because they require more than one individual to be interacting *at the same time*. Gamification features that can be performed asynchronously can be performed at any time convenient for employees.

### Improving awareness of others through Social Bookmarking

The first example, the Dogear Game (Figure 1) incorporated a single player guessing game with an internal enterprise social bookmarking system [3]. Players matched social bookmarks with colleagues who

created them. This provided opportunities for players to become more aware of colleagues’ interests, to discover interesting bookmarks, and to increase their interest in contributing new social bookmarks.

The game manifested as a plugin to the corporate instant messaging client, a tool nearly always active, making it quick and easy to initiate a round of play, capitalizing on individuals’ spare time – this game’s “moment of play”. This could in turn lead to moment of learning, where the player could discover a bookmark of personal interest or an unknown interest of a colleague. As incorrectly guessed bookmarks could also be recommended to colleagues, this moment could have broader impact on the player’s social network. Given that this was presented as an optional, short, casual game – the Dogear Game depends on the individual employee’s availability for a brief distraction from actual work. Nonetheless, the initial one month trial of the game had 87 players from more than ten countries.

### Contributing and Promoting Social Networking Content

Our second example is awarding points in a game-like setting in Beehive, an enterprise social networking tool [5]. Unlike the Dogear Game, which embedded a game as an IM plugin, Beehive Points incorporated a point-based incentive system to encourage contribution of content (e.g. photos, comments, lists) with an internal enterprise social networking site [5]. Points were computed based on the type and amount of content made by users, and displayed on individual profile pages and a leaderboard page (Figure 2).

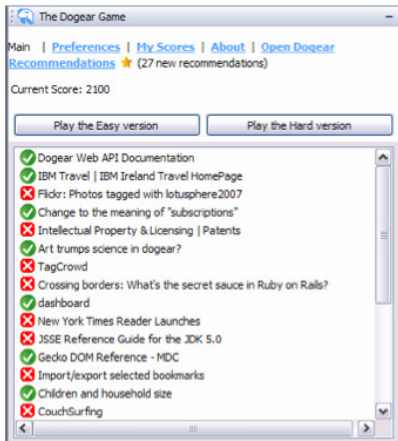


Figure 1: The Dogear Game

The screenshot shows a leaderboard titled "top bees in your network". At the top, there are four columns representing different bee types and their scores: "new bees 0 pts", "worker bees 110 pts", "hive bees 500 pts", and "super bees 2000 pts". Below this, there is a table with the following columns: "rank", "bee", "status", "total points", "photo count", "hive count", "buzz count", and "about you". The table lists five bees, with the first one being a "super bee" and the others being "busy bees".

rank	bee	status	total points	photo count	hive count	buzz count	about you
1	[Bee Icon]	super bee	2740	64	13	146	✓
2	[Bee Icon]	busy bee	1940	8	6	116	✓
3	[Bee Icon]	busy bee	1500	25	6	81	✓
4	[Bee Icon]	busy bee	1200	61	12	45	✓
5	[Bee Icon]	busy bee	1025	12	8	53	✓

Figure 2: Beehive Points' leaderboard



Figure 3: Beehive Honey's promoted content



Figure 4: Bluegrass embedded in a development environment

Following Beehive Points, the Beehive Honey system (our third example) incorporated a rating scheme to encourage promotion of a diverse set of content with the same internal enterprise social networking site [4]. Each week, a new group of users were temporarily awarded the ability to promote one photo, one list, and one event that had not been promoted before. Promoted content got highlighted on the site's home page (Figure 3), email digests, and flagged with a special icon. Promoters were thanked via email, highlighted on a special page, and got a star icon on their profile page.

Like the Dogear Game, both points and ratings relied upon the spare time of hundreds of voluntary participants in the corporation. However, this moment of play impacted an entire community of members, both positively and negatively. In the case of the points system, a noticeable number of employees were actively competing on the leaderboard which led to a number of people complaining about its influence [6]. In the case of the rating system, promoters and promotees engaged in social exchanges as a result, such as thank yous and appreciative comments.

### Socializing in Team Environments

The next two examples examined the use of game elements in team contexts. In our fourth example, the Bluegrass project explored socialization and collaboration among software engineers [8]. This was built as a 3D virtual world in a tab-based plugin to an enterprise software development environment (Figure 4). Tasks could be created and moved between the virtual and development environment. Photos from an internal corporate social networking service could be

imported and transformed into puzzle games for people to play and learn about each other.

Our fifth example, the Olympus project explored how employees can present themselves in online meetings [10]. This was implemented by adding 2D cartoon-like avatar creation, gesturing, and movement features to a web-based e-meeting system commonly used in the company (Figure 5).

Unlike the Dogear Game and Beehive cases, we found that the moment of play for both to be significantly more limited. The Dogear Game and Beehive cases rely on the spare time chosen by individuals' discretion during or after work hours. For Bluegrass, switching to a full-blown 3D experience proved to be too cumbersome – simply setting up the plugin and waiting for the team to meet was more work than worthwhile. Olympus was easy to deploy as a web application, but was found to only be useful before or after the actual official meeting. In other words, the moment of play was before or after everyone had to engage in the business at hand in the online meeting.

### Discussion and Future Directions

In this position paper, we propose that identifying moments of play is important when considering using game design elements in enterprise contexts. We examined moments of play from our past projects.

"Single-player" gamification can be applied to change individual social bookmarking and community social networking experiences, such as in the case of the Dogear and the two Beehive examples. The moment of play depends on the employee's individual time, and can potentially impact other employees who benefit

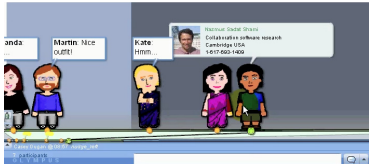


Figure 5: Olympus embedding avatars at the bottom of an meeting

from another's gaming moment or choose to engage in the same activity. This time might be construed as work-related (e.g. searching for key information, identifying useful contacts) or spare time (e.g. a brief distraction comparable to web surfing).

Work within the enterprise often requires team participation, such as software development (e.g. Bluegrass) and business meetings (e.g. Olympus). Here, the moment of play is a limited resource shared by the team. Factors like corporate culture, the team's social norms, and leadership style can dictate when it is appropriate for a team to participate in a gamification-based experience. The considerations for a moment of play by oneself may be different from a moment of play with a colleague, or with a client – such as our own experiences with “multiplayer” versus “single-player” gamification. Finding the right moment of play may also be essential for certain learning experiences – extending the learning strategy of “enrichment”.

We believe there are research opportunities for gamification within the enterprise. Gaining a better understanding of moments of play in individual and community contexts can help further this. Can a moment of play be beneficial and attractive to the individual, colleagues, as well as the corporation? The work context of the team, particularly synchronous teamwork deserves special attention by researchers and practitioners seeking to change the future of work in the corporation.

## References

[1] Cook, D. Why we turned Microsoft Office into a game. <http://www.lostgarden.com/2010/05/wordcamp-2010-why-we-turned-microsoft.html>

[2] Deterding, S. Pawns. Gamification and its discontents. Playful 2010. <http://www.slideshare.net/dings/pawns-gamification-and-its-discontents>

[3] Dugan, C., Muller, M., Millen, D., Geyer, W., Brownholtz, E., Moore, M. The dogear game: a social bookmark recommender system. In *Proc. GROUP '07*, ACM Press (2007), 387-390.

[4] Farzan, R., DiMicco, J., Brownholtz, E. Spreading the honey: a system for maintaining an online community. In *Proc. GROUP '09*, ACM Press (2009), 31-40.

[5] Farzan, R., DiMicco, J., Millen, D., Dugan, C., Geyer, W., Brownholtz, E. Results from deploying a participation incentive mechanism within the enterprise. In *Proc. CHI '08*, ACM Press (2008), 563-572.

[6] Farzan, R., DiMicco, J., Millen, D., Brownholtz, B., Geyer, W., Dugan, C. When the experiment is over: Deploying an incentive system to all the users. In *Symp. on Persuasive Tech.*, in conjunction with *AISE 2008 Convention*, April 2008.

[7] McDonald, M., Musson, R., and Smith, R. Using Productivity Games to Prevent Defects. In *The Practical Guide to Defect Prevention*, Microsoft Press (2008), 79-95.

[8] Rohall, S., Cheng, L., and Patterson, J. Bluegrass: Lessons for deploying virtual worlds within the enterprise. In *Workshop on Virtual Worlds, Collaboration, and Workplace Productivity, CSCW 2008*.

[9] Seriosity Attent. <http://blog.seriosity.com/products.html>

[10] Shami, N.S., Cheng, L., Rohall, S., Sempere, A., and Patterson, J. Avatar meet meetings: design issues in integrating avatars in distributed corporate meetings. In *Proc. GROUP '10*, ACM Press (2010), 35-44.

[11] von Ahn, L. and Dabbish, L. Designing games with a purpose. *Comm. ACM*, August 2008, 58-67.