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SECS: Socially Evolving Community System

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Abstract—SECS is an Alternative Reality Game focused on stimulating social cohesion via the integration of gamification techniques in the citizen's social routine. SECS is currently under development as a pervasive game for Android.

Keywords—*Alternate Reality; social cohesion; Gamification; Pervasive Game;*

I. INTRODUCTION

SECS is an *Alternate Reality Game (ARG)*, i.e., a game that merges aspects of the real world with the virtual world, making use of the available technology and transmedia to communicate the goal/objectives of the game and transport the player from everyday life reality to the reality/dimension of the game. The game itself can take place on a virtual or a physical level, but usually the virtual side of it is just a mean to communicate the rules and information of the game itself while it's being played in a real-world location. Its players have a direct impact on the game's outcome and are needed for it to happen. SECS follows this trend and focuses on assisting social cohesion, by applying gamification techniques to activities developed during our daily routines. The main purpose of SECS is to assist in a quicker match of interests between users in environments that are prone to social isolation, namely, remote regions (e.g. due to wide geographical areas, poor Internet access, or social exclusion) and large-scale urban environments (due to a fast-paced and individual living).

Our motivation relates with the need to fight back social isolation, and on the advantage that pervasive, non-intrusive technology can bring in the context of large-scale environments. To assist the proposed goal of improving social cohesion, SECS follows the trend of integrating unstructured and unsupervised, social play into the individual routine [1] [2] [3]. In such trend, social play is defined as a state of engagement in which the

behavior of one partner is contingent on the non-literal behavior of other partner [2].

The inclusion of gamification techniques into real living is a recent trend, which has been applied in sectors such as time/activity management [4] or user recommendation systems [5].

II. SECS VISION AND CONCEPT

SECS shall be developed on-the-fly and via matching users' expressed interests, thus creating a global network of connected people, cities and places. Users are identified by specific profiles, which relate to a contextual notion of *place*. Inside *places* there are numerous tasks to be performed, and according to each user's profile, the tasks change. When a task is completed, the player receives credit for it and a new task. This credit can range from intellectual goodies to material goodies, or some kind of virtual currency which can be exchanged for actual money.

By attributing tasks to the users based on their ideals and preferences, a first goal is to assist in matching and connecting people who think and act in similar ways, thus creating a feeling of connectedness between the users on a specific “place”, then connect users across multiple places, and finally the whole world in an evolving cooperation, be it through daily missions and cooperative missions that may take longer.

A second goal relates with a study, via SECS usage and also comprising surveys, to statistically understand the impact of a tool such as SECS in the development and rise of social cohesion efforts.

A. Example of Applicability: Promoting Community Forming

Rudy, Elsa, and Matt have SECS installed on their smartphones. Rudy is an environmentalist doing a major in Organic agriculture and wants to build a garden for organically produced fruits and vegetables but doesn't have space for it at his home. He would also like to share his knowledge and test new growing techniques. Elsa is a teenager that has various likes/interests related to environmental causes, and she has a vast knowledge in Permaculture Gardening, owning a large and big fertile ground which produces enough food and vegetables for her and her family so she wants to share her surplus. Matt is a middle aged guy that likes the general outdoors, wants to learn about sustainable living techniques and permaculture. Matt has a Bio-Construction diploma and his goal is to create an eco-village. Upon listing all their needs on their SECS profile, the SECS cloud analyses them and sends them a cooperative mission, they each receive it on their smartphones and arrange a meeting at which they discuss what they would like to do for the community and create missions for the three (since they are the first Game Masters), then each of them goes off to their missions and a community starts to form around them as new players come. When the community founders succeed on accomplishing the community goals they each receive 200 personal points.

In order to promote social support, the creation of active and engaged communities specific missions emerge from the pervasive analysis that the SECS/SECS Cloud application does of its users' interests and likes these missions are deployed to the users android phones, by logging/tracking each of the players contributions to the objective of the group/community everyone is aware of what they should do and how well they are performing.

The group/community goals are chosen and listed by the community Masters, who get their title from helping to create, promote, consolidate, and share the community.

This way it's ensured that the foundational objectives of the community are achieved.

III. EXPECTED OUTCOME

SECS is currently being developed as a pervasive ARG, expected to be developed as an Android application, to allow usual citizens to interact in a pervasive way.

On a first phase (Summer 2015) SECS shall be provided under LGPLv3.0 as a Facebook plugin being the intention to assist in exchanging missions defined statically by users, via a wide social network (wide user database). As a consequence, during this phase, it will be required that users periodically update their interests database.

On a second phase, SECS shall be expanded to integrate pervasive data communications. This means that the exchange and matching of interests as well as the definition of missions can be directly exchanged between SECS users, not necessarily connected to the Internet.

On a third phase, SECS shall be further extended to integrate a more dynamic behavior, namely, the potential for missions to be developed on-the-fly, derived from individual and collective behavior learning.

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