Supporting the emergence of specific forms of encounters through location awareness : the case of the Mogi players

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Abstract

This paper presents a case study of the uses in Japan of a multiplayer location-aware mobile game in which users must gather sets of related objects that are both 'virtual' and localized. The key feature is a virtual onscreen map which is continuously reset with each server request and which features geo-localized players and virtual objects within a radius of 500 meters. This particular interface therefore allows players to 'see' the location of other players onscreen and assess their mutual proximity. We analyse how these features are exploited by participants to accomplish collaboratively four types of specific encounters, that may be characteristic of location-aware communities : a) noticing another player's position by a text message in a way such as to invite him to further elaborate b) a form of co-proximity event in which two players are close enough to appear on the other's mobile screen ; such onscreen proximity invites strongly to a text message interactions and projects the possibility of a face to face encounter c) another form of co-proximity invented by players in which they disjoin they "freeze" their icon in a given place, and try to try to get their icon to touch the icon of another mobile player d) rate face to face encounters between players which are experienced as a collective accomplishment and a public performance.

Introduction

Many hopes for the future of advanced mobile services are pinned on sensitive services. The questions raised by the sudden appearance of these technologies are of direct interest to the social sciences. The use of context-sensitive mobile services closely binds technical protocols to social ones, especially those governing interactions in the public sphere. These devices participate in a real engineering of encounters between people and things, in both material and immaterial forms. They are set to play a key part in determining the way in which information

and communication technologies reshape our structures of anticipation, that is, our perceptions and expectations concerning the ways in which the entities constituting our environment can act and appear to us, here and now (Thrift, 2004).

In recent years the development of user-position sensitive mobile technologies has been oriented in two complementary directions. First, the technology contributes towards an engineering of traffic encounters. The terminal projects a digital 'aura' over a short distance, so that when terminals projecting a compatible profile pass close by, information can be exchanged. Part of the task of transforming random spatial proximity into an encounter is delegated to the mobile terminal. This functionality is being explored to enable motorcyclists passing one another to exchange information directly between their mobile terminals (Esbjörnsson et al., 2004). It triggers contact between users with complementary profiles by combining the small ads model with forms of technology-mediated spatial proximity[1]. Resources can be provided to users via wearable computer equipment and perceptive prostheses to access virtual objects in an enhanced environment, as in the Arquake game derived from Quake (Piekarski and Thomas, 2002). Other devices are based on proximity and detection of real objects to trigger scenarios, like the children in 'Backseat Gaming' where cars passed and detected by the mobile terminal set off game actions (Brunnberg and Kulterström, 2002).

Second, the technology represents an area of activity accessible by mobile screens, where the actors' positions are directly related to their real position in space. Active Campus, a project of this kind, is designed to experiment with this technology in the university environment (Griswold et al., 2003). Another one is deployed around an experimental game, 'Can You see Me Now?', in which a ludic environment is created in an urban setting. To act or interact the players have to align their incorporated representations and perceptions with those afforded by the screen setting (Benford et al., 2003). The common base of these technologies is a location-aware graphic terminal, interfaces through which the participants can be placed together on an electronic card in relation to their absolute and relative positions, and a text-messaging system. The digital game space may also feature information resources and virtual objects 'placed' there by the designers[2]. In the 'Active Campus' experiment visitors to a place can leave 'e-graffitis' to which equipped users have access, via their terminals, when they visit the place. These systems have three characteristic properties:

[1] Because terminals are sensitive to the profiles projected some ten metres away by means of the Bluetooth technology (Lejealle and Licoppe, in progress).
[2] To act on them in the screen space, the equipped user has to be physically close to their 'location'.

- The digital activity space is articulated to the 'real' space via geo-localization;
- It constitutes a shared space, the medium for collective activity where participants and their informational environment are made reflexively visible by means of mobile graphic interfaces;
- Such technological systems are incorporated in social games which structure and define the context of the action and distribute the roles, expectations and responsibilities in the framework of the activity which is relevant to their use. They contribute to making encounters meaningful and shape the conventions governing the course of interactions. In this sense, such devices are embedded in institutions: ActiveCampus in the university institution (Barkhuus and Dourish, 2004) and Can You See Me Now?, like the game Mogi that we are about to examine, in the urban public space.

The adoption of such devices provides users with affordances so that together they can combine social and technical protocols. Through repeated shared use, users create and stabilize forms of mobility, encounters and coordination that extend and renew both those characterizing institutions (the university, the city) and the activities that these technologies equip and 'augment'.

The Mogi game that we are about to examine here corresponds to this design perspective, although it is not an experiment. The game was developed by a French start-up and commercialized by a Japanese mobile telecom operator[3]. The players, most of whom have never met before, register by subscribing on a portal. The device provides them with access to resources similar to those of the above-mentioned two games. By playing, making contact and interacting, Mogi players bond in an emergent collective. They inhabit a particular public space whose properties they have to try to understand. We will now focus on mobile behaviours and the types of conventional encounters that develop or are evolved within such a location-aware community. By providing variously designed publicly accessible maps of the game play and location of players (and items), Mogi supports the occurrence of noticeable co-proximity events. This constitutes a new kind of infrastructure of encounterability, based on collective screen-based location awareness.

[3] An extensive description of the history of the design of the game (with changed names) was given in (Licoppe and Guillot, 2006)

The empirical work draws on a series of in-depth interviews with ten players who had played actively for over three months, and on the analysis of an anonymous corpus of mobile messages exchanged between the players.

2. The location-aware multiplayer game Mogi and its users

2.1 The game

The game Mogi was developed by a team led by Mathieu Castelli at a French start-up (Newtgames), and was commercialized in 2003 in Japan by the operator KDDI. The gameplay consists in collecting virtual objects with a mobile phone. These are 'localized' (in the sense that users can act on them only when they are close to their virtual position) and are continuously created and renewed by the game designers. The player has an interface, the 'radar', that features a map with a radius of 500 meters. This map represents the player's environment, with his or her pictogram in the centre of the mobile screen, surrounded by those of the other players and virtual objects situated within the 500m radius. These data are updated with each server request[4]. When players are less than about 300 meters[5] from an object they can capture it with their terminal. Each object belongs to a collection. Completing a collection earns points, and players are classified according to the points accumulated. The basic idea is to create a community of high-tech hunter-gatherers whose activity is set in an economy based on the bartering of virtual objects and a sociability based on text messaging.

The main functionalities of the game are accessible from the main menu. The five most important are:

- The 'radar' interface, the map of the player's immediate environment. By clicking on a sufficiently close object on the map the player can pick it up by launching a collection module. Clicking on a player's icon on the screen opens a window for text messaging.

[4] The rapidity of these connections with the game server is critical as regards the acceptability of the game. At certain times the connection time ranged from 30 seconds to one minute, which was experienced as a real problem by players.

[5] Experience of the game is richer with a GPS terminal (the precision of geo-localization is then a matter of a few meters) but the game also offers the possibility of localization from cells. Experienced players have become accustomed to constantly switching from one to the other in their quest for objects since the map in cell mode is slightly different to the GPS map, due to the position of the antennae. It is therefore likely to reveal new objects in one or two clicks, without the player moving at all.

- The module dedicated to text messaging. The addresses and messages exchanged are accessible only within the game server. Players can create buddy lists of favourite correspondents (Mogi friends or the members of teams to which they belong[6]).
- The exchange and transaction module (for exchanging objects missing from one's collection).
- The user profile: those who can choose to make all or part of the inventory of objects that they possess, as well as the type of object they want, visible.
- Public classification of players according to the number of accumulated points. This classification is frequently consulted by players and introduces competition between them.

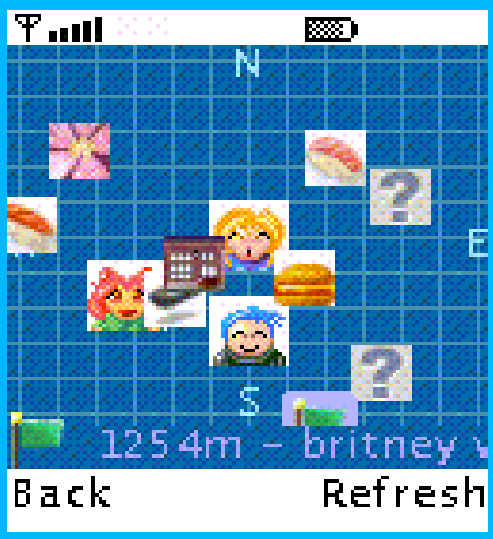


Figure 1: The radar interface that represents the local map of the game around the player (whose icon always appears in the centre of the screen) in an area of one square kilometre. The other players and geo-localized virtual objects appear on the map. The 'closest Mogi-friend' is indicated at the bottom of the screen, with the distance even if it is more than 500 metres. This functionality was added by the designers to facilitate the 'onscreen encounters' discussed below.

The game objects are designed by the design team. Certain collections are very simple, for instance precious stones spread across Japan. Others play on the players' situation and context. Certain objects are available only in some parts of the country, other collections are visible and accessible only at certain times of the day. The design was recently oriented

[6] This possibility of creating teams and getting together, introduced shortly before my study, has been highly successful.

towards more advanced objects, virtual 'creatures' (that create, move or destroy nearby objects), chests (players close to them can aim for an object and thus obtain the right to open the chest, with the hope of winning a highly valuable object), or quests (additional points can be earned by moving an object close to a given place). This diversity illustrates an important property of context-aware services. Context-awareness concerns not only people or terminals but also informational objects that can be 'placed' in the mobile user's environment. As the Mogi example shows, it is possible to enhance a mobile users' environment almost infinitely, and to create rich and complex ecologies that could be called 'augmented' towns.

It is also possible to log onto Mogi on a PC, from a website. In this case the interfaces and functionalities are different. The Web interface includes a chat function not accessible on mobile terminals, but its key feature is that it allows PC-based players to visualize maps showing other players and bigger geo-located objects, throughout Japan. Since they are stationary they can pinpoint the position of highly coveted objects or unusual movements of known players. This is well known among players and has the very important consequence of turning the Mogi players into a location-aware community, in which one’s location (as presented in the interfaces) and by way of consequence, one’s displacements, become public data, always potentially accessible to other known and unknown players.

2.2 The players

In July 2004, at the time of our inquiry, the game had about one thousand users, all of whom were subscribers to a service offering an unlimited exchange of mobile data for a flat rate (the WIN rate of 4,200 yen offered by KDDI). Players considered that this type of rate freed them from any worry as to the intensity of their use, and that its existence had a liberating effect relative to the development of their game practices. The subscription to the game as such was 210 yens per month, which the players considered negligible. KDDI ran no adverts on the game. As part of promotion campaigns, it nevertheless offered a one-month free trial period twice a year for Mogi and many other games on its portal. Most Mogi players who had previously had a WIN subscription had taken advantage of these promotions to try the game, after being attracted by the context-aware concept applied in Mogi.

The Mogi gameplay differs from games available on Internet because it is a multiplayer game based on a very straightforward scenario. Although no precise statistics are available, user profiles are clearly very different to those observed on the Internet. There are almost as many

female as male users. A large proportion of users are in the 25-40 age-group. Our study focused on five men and five women in that age-group with widely diverse social origins, from a bank manager to a packer, a sophisticated young mother to a saleslady in a department store. Two of them had a slight handicap and found that the sociability of the game allowed a form of integration[7].

Basically, two very different types of playing behaviour exist:

- Determined collectors: they accumulate objects (sometimes ten times the same collection) and interact with other players, especially to obtain the objects they still do not have.
- 'Social' players who are not particularly concerned about accumulating objects. For them the main objective is to meet other players and to communicate with them. They are particularly attentive to forms of politeness that develop in communities of players and to the proprieties that onscreen encounters have to respect.

Regarding encounters most players avoid meeting face to face, and elude such proposals. Similarly they also rarely exchange their mobile email addresses, so that most of their text messages are sent and received on the game dedicated text messaging system. Therefore, the social interactions that are elicited in the course of playing Mogi are mostly kept within the game technical infrastructure. This apparent shyness may be a feature of inhabiting a location-aware world with unknown others (outside the scope of the game).

3. Using location awareness to elicit mediated encounters based on text message interchange

That location and displacements are public is something of which players are aware. It may even become a matter of open discussion between players. In the excerpt below, one player (T.) discusses a long and unusual trip she plans to make, and indicates how she expects others to notice, when they see the location of her icon in the maps of the game.

Extract n°1 (anonymized):

1. T (07:59:32): Only you and A. know that I'm going as far as Shikoku

The others will be surprised when they look at the radar. (*^m^*)

[7] For cultural and religious reasons, it seems that people with handicaps find it very difficult to be socially integrated in Japan.

2. *K (08:03:18) : Yes. Everywhere people will panic. Or maybe nobody will even notice. Which would be a bit sad. (Laugh)*

3. *T (08:07:20) : But at least A., T. and R. will notice.* (≥▼≤)

Her correspondent responds by joking about it, even suggestions that in case nobody notices, it would even be a pity. This shows how players orient towards their being accountable for their positions on a routine basis, and openly acknowledge and discuss the fact that their mobility is made visible (particularly to PC-based players, which are able to see the whole gameplay).

Because location is made public, the actual position of a player at a given time is something that is noticeable and warrants noticing, as shown in extract n°2. One player, M., probably connected through his PC (for he gives no indication there and after that he is anywhere around Haneda Airport), remarks on the location of another player G.

Extract n°2 :

1. M. (15:23:35) : Ah?  *(plane) Are you near Haneda Airport ?* 

2. G. (15:24:09) : Yes, that's it.  *(happy smiley)*

3. M. (15:25:34) : Are you leaving for work ?  *(question mark)*  *(flexed arm) Good luck*  *(heart)*

The sequential organization of the "noticing" turn is interesting. It starts with an exclamation that works as a 'change of state token' (Heritage, 1984). It constitutes what has been going on as a cause for wonder and as an occasion to invite further elaboration. Considering the question (which will be treated by the other player as a request for confirmation) about location that comes after, the turn constitutes M. retrospectively as a PC-based player remarking an unknown position for G. The question is emphasized with a 'question mark' emoticon, therefore strongly inviting G. to respond: unusual location and displacements are treated as "mentionables", that may be used as a legitimate pretext for initiating interaction. Some sense of the familiarity between both players also emerges as a practical accomplishment within the exchange. No preliminary greetings are offered or requested. Moreover, the 'ah' token suggests astonishment with respect to the airport location of G, and some previous knowledge about where G. usually is.

This contrasts with the following extract in which noticing the other player's position is used to elicit a text message encounter between both players, but in which the first player has only recently gotten in touch with the other one (in order to discuss his possible joining the other's team)

Extract n°3 (location changed):

1. P. (16 :21 :42) : hi /  *(figure that raises the right hand)*
2. T.(16 :53 :36) : hi  *(smiling smiley) travel*  *(lol) Kyoto*  *(smiling smiley)*
3. P. (16 :55 :22) : are you travelling ?  *(smiling smiley)*  *(question mark)*
4.. T. (16 :59 :18) : Yes.  *(smiling smiley)*
5. P. (17 :02 :57) : Kyoto is known for tea  *(japanese tea) and thermal spas*  *(thermal spa) !*  *(witty cat)*  *(question mark)*

Here the turn in which P. remarks on T.'s location is preceded by a more formal exchange of greetings. The noticing itself does not imply previous knowledge about T.'s usual whereabouts for it refers to the fact that T. is currently changing location noticeably for he is making an extended trip. Besides providing us with an example of location noticing as a pretext for an encounter between players that are merely acquainted, this small exchange shows how discussing the qualities of a particular location relevant to the other participant may be produced and treated as a 'safe topic' for text messaging. Discussing location within the Mogi location-aware community of players is on a par with discussing the weather in a village face to face encounter (Goffman, 1971).

Treating location as noticeable and mentionable, and noticing it and mentioning it to invite to and initiate a text message encounter is a routinized practice in the Mogi location aware community. This is demonstrated by extract n°4, in which two players, S. and Y., comment successively on T.'s unusual location.

Extract n°4 :

1. S. to T.(14:28:19) : ah!?  *(lol) you are in an expected place*  *(lol)*
2. Y. to T. (15:00:25) : today you (polite form) are in an incredible place  *(lol)*
3. T. to S. & Y. (15:35:43) : what then ?  *(lol) I am travelling to Kyoto.*  *(lol) on the highway I can do nothing but play at Mogi*  *(lol)*

What is interesting is that T. responds by sending the same confirmatory text message to both of them at the same time. These joint messages were rare in the Mogi text message corpus. The other instances concerned collective greetings. Greetings are both highly ritualized and routinize. Our interpretation is that extract 4 provides evidence for the ritualized and routinized character of "location noticing" messages as an invitation to engage in a text message encounter, between acquainted players.

However routinized such location-based "opening gambits" may be, they are fraught with potential threats to the face of participants, and they may call for some form of "remedial exchange" (Goffman, 1971). This is the case in the next example

Extract n°5:

1. N. (18:53:39) : Here i am I am just back  *(2 hearts, one large, one small)*  *(kissing smiley)*

2. T. (19:19:57) :You must be ta ta ta ta ta tired  *(apologizing cat) How courageous you are You went all the way to Osaka.*

3. N. (21:32:51) : You watched me  *(surprised smiley) Indeed I got kidnapped by my ex*  *(tear or sweat)*

This particular exchange starts differently. It is the mobile player who first proposes an unsolicited assessment of her mobility and current location. Since the assessment is about her own experience it is part of her 'information preserve' and she has first rights about such claims. However the other player responds by providing in her second turn a double assessment concerning her current experiential state (you must be tired) and further elaborates about her past mobility by stating the city she has just been to. Considering the sequential organization of assessment pairs, T. is strongly competing for epistemic rights with respect to the assessment of the matter at hand (Heritage, 2004). Since that particular matter directly concerns N.'s experience, it may be seen as a potential infringement of N.'s informational preserve. N. deals with this in the third turn. She starts by exclaiming about being watched by T. Qualifying location noticing as 'watching' is one way to make it look improper. However she goes on by providing an explanation of her trip to Osaka which shows she does not wish to pursue the matter any further. Such offhandedness show how deep the expectation runs that one's location may be noticed by other players and one may have to account for it.

In summary, the Mogi case shows some of the consequences of the publicity of members' location. The current location of a given player is treated as a mentionable topic that is available (in principle) and warrants offers to initiate a particular form of encounter, based on text message interchange. The categorisation of players as localized and mobile entities is always relevant within the collective game activity, and pointing towards another player's location is a routine practice that displays one as a member. Location is there to be seen, but noticing it may sometimes infringe on one's "informational preserve" and require some specific forms of remedial interchange. Mentioning the location of another player is a way to produce affiliation markers and "doing being familiar", We believe that these features characterize more generally the emergence of a public order based on visibility of one's location to other members and the development of specific ways to manage "relations in public" in location-aware communities (Goffman, 1971).

4. Raising up the interactional stakes: mediated co-proximity events.

4.1 Co-proximity events and "infrastructures of encounterability"

A particular form of invitation to further forms of encounters is occasioned by co-proximity events. While a lot of attention has been paid to co-present interaction in the work of Goffman and its successors, much less attention has been given to co-proximity events. A co-proximity event is a situation in which two persons are made aware that though they are not co-present, they are close to one another, close enough that getting into a face to face interaction may become an issue, usually to be resolved through communication at a distance. In a recent study of mobile phone call recordings (Morel, 2006) instances of the construction of co-proximity events involved partners in a couple calling one another to update their mutual knowledge about their respective locations, particularly as they got closer and one passed a shared meaningful landmark, or, perhaps more typically, a woman calling the home of her best friend from her mobile, and leaving a message stating that she happened to be in the vicinity, and checking whether her friend was at home and potentially available for a visit and a chat. In all these examples, one participant is 1) aware of a particularly form of proximity for the other 2) calls the other to turn this into a shared knowledge, thus constructing a co-proximity event 3) presents it as a serendipitous happenstance that might lead somehow to a face to face. One could think easily of similar examples in professional contexts. Such situations occur mostly between persons that are familiar with one another, because the one who notices the proximity event does it on the basis of previous interactions and extensive

knowledge about the habits and mobility patterns of the other person. Noticing them and mentioning that noticing is part of "doing being familiar", to paraphrase Sacks.

There is therefore a spatio-temporal infrastructure of encounterability that extends much beyond the times and scenes for co-present interaction. Space and time are deeply interwoven with relational knowledge and shared histories, so that for a given pair of acquainted subjects, it is textured so as to afford a sense of closeness (in absence), that warrants getting in touch, and whose experience may be turned into a serendipitous opportunity for various forms of encounters and affiliation-building. Technological systems providing subjects with mutual location awareness provide new occasions and new formats for constituting co-proximity events. They can be described as augmenting the places we dwell in with a new "infrastructure for encounterability". The location aware community of Mogi player can be seen as a laboratory, in which new forms of co-proximity events are collaboratively evolved and produced.

4.2 The interactional consequences of seeing one another on the same mobile screen map

A typical Mogi-supported co-proximity event occurs when two players connect to the game and see one another on their mobile device, through the 'radar' map interface. Such mediated co-proximities events are specific to location-aware technologies. The greater the density of players the more frequent co-proximity events may become (Licoppe and Inada, 2006). One of their key properties is that players expect such events to be mutually perceived and noticed by both participants, supposedly connected and playing at the same time (though, as we will see in the next section such an assumption is not always verified). This calls for an extension of the 'reciprocity of perspectives" principle (Schütz, 1962), in which if I see you on my screen, I assume you see me on your screen.

Participants treat mediated co-proximity events as projecting a possible text message encounter. A convention has evolved and perhaps stabilized among the players in which mediated co-proximity events between two unacquainted players may be ignored, while mediated co-proximity events between known players are expected to be noticed and lead to the initiation of a text message interchange (in that case, the co-proximity is turned into a mediated encounter). When they remain silent and choose not to acknowledge the screen-mediated mutual perception of their position and proximity, they become accountable for it and often treat such events as breaches of the relevant normative expectations. Extract n°6

shows how such a norm operates, for one player mention the mediated co-proximity after the fact, and offers an apology to the other player for not properly acknowledging it at the time:

Extract n°6 :

1. D (08:11:24) : Hello Master. It seems we were close to each other the other day. But I noticed only much later and I wasn't able to confirm. Where were you? Enjoy your work today, like other days.

2. S (08:22:49): Hello. I was at Motomachi and at Bashamichi. We were about 600 metres apart. Work well, despite the heat that's been so intense since this morning already. Today's word: I haven't been pleased with the behaviour of members of the team recently.

3.D (08 :33.52): Oh yes, I remember. It was probably when I stopped at Ishikawacho to play Mogi that we were so close to each other. We passed each other without being aware of it. Yes, it's really hot today. You must drink a lot Master. I wish you well for your work. Oh yes, what behaviour are you talking about?

The fact that the other player ignores the apology and does not make explicit his awareness of the event allows the first player to skip further remedial work. If one of them appeared to be unaware of it, this was no real co-proximity event, and no impropriety is involved in the fact that it was not turned into a mediated encounter on the spot.

But mediated co-proximities also actually involve some degree of spatial closeness. Since the mobile screen map is only a few hundred meters wide, mediated co-proximity project a possible face to face encounter to segue. In most cases this is discussed in a text message interchange, with a conventional initiation of the type 'We're close, aren't we?' 'Yes we are close', which also serves to confirm the mutual awareness of the co-proximity event. An interesting example is provided in the next extract:

Extract n°7 :

1.R.(20:19:38) : this evening,  *(surprised smiley) we are very close aren't we?*

2. S. (20:22:55) : Waouh  *(sweat) we are close*  *(tired smiley)*

3.R.(20:24:53) : you ran away  *(3 disappointed smileys)*

4. S (20:27:14) : no  *(sweat) it is because i got on the Marunouchi line*  *(happy smiley)*

5.R.(20:28:35) :  *(train) It's not the Yamanote line* 

6. S (20:35:26) : no  *(water droplet, tear, sweat) for it is not my direction.*

7.R.(20:36:43) : So be it ... sorry  *(apologizing cat)*

8. S (20:40:34) : everybody can make a mistake (happy smiley) maybe one wishes to run when one gets so close  *(sweat) today i got near several players*  *(smiley that shows surprise)*

9.R.(20:49:18) :  *(smiley that shows surprise) as one might suppose there must indeed many of us at the center of Tokyo.*

The reference to S's proximity in turn 1 is characteristically modulated by a marker which tones it down in a hypothetical or suggestive mode, or turns it into a question ('It seems that…', 'It appears that…', 'not so?'). In each case observed, the respondent did indeed treat the first turn as a summons in which he was invited somehow to confirm this mutual proximity, after which the interaction continued. The opening of the interaction by an adjacent pair oriented towards enunciation and confirmation of the participants' mutual proximity is a conventional device for initiating text message-based –interactions. It is specific to the location-aware public space of Mogi, and emerged from intensive use.

R. then regrets her having moved away, therefore making a face to face encounter a possible and expected (on his part) outcome of their mediated co-proximity. Interestingly she first offers an account that makes irrelevant the notion she eluded that expected outcome (turn 4), and then provide in turn 8 first a kind of formulaic justification for eluding face to face encounters and then one based on her current experience for she lived several mediated co-proximity events with other players. The implicit inference here is that one cannot take into account all co-proximity events, and R. takes up that inference in his admission that indeed there are many players, which closes the issue (turn 9).

Players orient themselves towards treating the onscreen co-proximity as a legitimate occasion for a text message encounter and, possibly, a face to face encounter (even if they almost always elude the latter possibility).

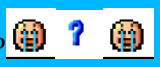
4.3 Getting avatars to "meet": aiming at "onscreen proximity" while ostensibly eluding co-presence

Without intending it, the designers of Mogi have left open the possibility for players to "freeze" their positions in a given place, by getting there, connecting to the game, and not refreshing their radar screen after they have left the place. Players have been quick to discover

and exploit this loop in the game software. They have used it to invent a new form of playful encounter based on the disjunction of their actual embodied location and the apparent onscreen location of their icon that such a "freezing" of the icon's position on the game map allows. The goal is for a player to position his icon at a given place so that later another player will move so that his own icon will appear onscreen close to the first one, or, better still, will touch it. This practice is called 'cara-gattai', cara standing as an abbreviation for character or icon, and 'gattai' referring to the concept of joining, or rejoining. Unintended by the designers, this practice testifies to the way the Mogi users engage in an active and innovative appropriation of the game: they are "active users", a theme of growing concern for Science and Technology Studies (Oodshorn et Pinch, 2003) and particular relevant to online game communities. Extract n°8 provides a typical 'cara-gattai'-related exchange.

Extract n°8

1. D. (16:07:41) : Congratulations for the gattai 

2. F. (16:09:22) : Did you see it ? 

3.D.(16:12:55) : I found it immediately  *It seems thar Mr G was trying hard since yesterday* 

D initiates the exchange by relying on the gattai as something noticeable, that was even standing out (she could notice it 'immediately', turn 3) that may be casually remarked upon. F collaborate to that treatment of the Gattai as an interactional resource by returning a question inviting D to elaborate on the conditions of her noticing.

We have observed several instances in which either a player initiated an attempt to do 'cara-gattai' with another and discussed this accomplishment with others, and some in which other players suggested that idea to a player which was moving so that the possibility of 'cara-gattai' with another player could be anticipated. 'Cara-gattai' is a fundamentally a public performance whose accomplishment by two players (one acting deliberately and the other collaborating deliberately or participating unwittingly through his current displacements) rely on the noticing and the appreciation of an audience of skilled connected players, liable to make inferences from positions and movements of icons on the screen to potential or actual co-proximity events. Sexual undertones that play on the embodied intimacies of (public)

mediated co-proximity events are often alluded to, displaying a particular mode of appreciation of 'cara-gattai' as a public performance.

In the following extract, one female player spontaneously 'exclaims' on the 'cara-gattai' performed by the other player, he asks her about their exact gattai configuration which he has not seen itself (displaying his interest in the actual iconic consequences of that achievement), and she answers by developing the sexual implications of the configuration she has noticed.

Extract n°9 :

1.A. (15:31:50) : *(lol smiley)* *Gattaaaai* *[B][8]* *is mounted over* *C*

2.B. (15:33:36) He he *(strong arm)* *(musical note)* *What, am I on top* *(question mark)*

3.A.(15:34:38) : You are on top *A rider on a horse*

The development of 'cara-gattai' as a shared playful practice among the community of players stems from the ability to assess and monitor the distance of icons on game maps with respect to the possible production of a co-proximity event), and on the way the design of the game supports the noticing of screen-mediated co-proximity events. Moreover the practice of doing 'cara-gattai' ostensibly relies on the disjunction between what happens in the screens and in the space of ordinary perception: 'cara-gattai' is meaningful in the way it actually disjoins co-proximity and co-presence, while preserving co-presence a salient feature of the situation, as a potential relevant development that maybe mentioned, discussed and joked upon. It shows how players orient towards a dual accountability regime, in which they work to make their location and mutual positioning accountable both in the 'physical' space of 'ordinary', embodied experience, and in the mediated spaces constituted by Mogi players' screens. 'Doing 'cara-gattai' also makes visible how much the collective ethos of the game is grounded in normative expectations about the public character of location. As one player puts it, « one wants to show others than we are in the same place and having fun ». The practice of 'cara-gattai' testifies to one's commitment to that collective ethos, through a normatively expected contribution to the kind of public good on which such a location aware, leisure-

[8] [B] refers to a pictogram describing the player B.

oriented community is founded : creating collective fun by playing in a meaningful way with publicly noticeable mediated co-proximities.

With respect to actual face to face encounters, doing ‘cara-gattai’ is a way to play with the meanings of co-present situations while keeping actual co-presence at bay. This displays co-presence in the location-aware community as something which is fraught with potential dangers, and that is to be eluded most of the time. Through the collective practice of ‘cara-gattai’, face to face encounters within the location aware community are constructed as highly consequential situations, and that, as such, are to remain exceptional.

5. When face to face encounters become a public and collective performance

Players rarely get to meet face to face. When they do so, such a face to face encounter, if it occurs while they are connected, will be a public occurrence, and a highly noticeable and noticed event, for it would lead to a superposition of their icons on the gameplay maps. If the encounter involves a male and a female player, they also would be open to all sorts of lewd inferences and comments. Players therefore often orient towards the very singular mediated public character of face to face encounters in the game community by logging out during the encounter. But then they stop sharing their location with other players, a sharing in which the social order of the Mogi community is grounded. A player we have interviewed thus summarizes that particular tension : “If a man meets a woman face to face, other players will notice the two superposed icons, and rumors will start to propagate. It will become difficult for them to go on playing Mogi. (Question : but they can always log out when they meet ?) In that case only them will have fun. It is a dilemma. One wants to show others than we are in the same place and having fun. Then there is a struggle between the desire to show oneself to others and the embarrassment to be seen by others“.

There are some instances which vividly show the way the meaning of face to face encounters may be reshaped in a location aware community. In the example we want to discuss here, one (female) player decides to travel to a regional town, for private and leisure-related reasons. It happens that a player in the same team with whom she is well acquainted and she has been flirting lives in the same region, and she has told him about her trip. He then decides to move also towards her destination.

In line with the behaviour discussed in the previous section, their trip is a public feature. Other players from their own team, or players they are acquainted with from other teams keep on noticing they are on the move and judge they might be getting into a form of co-proximity later on. They send them text messages that makes explicit such noticing, and invites the mobile players to elaborate, which leads to the type of exchange shown in section 3. As they get closer some players (those with whom they text messages on a regular basis) suggest to the moving players that since they are getting closer, and this is an unusual occasion, they might seize it to accomplish a 'cara gattai' encounter. The male player responds enthusiastically to this suggestion, which leads to many text messages discussing his successive attempts to accomplish 'cara-gattai' with the travelling female player.

Meanwhile, he has been continuously in touch with her and the possibility of an actual romantic encounter has emerged has a salient possibility. Again the potential face to face encounter is discussed by text messages with some other players which appear to be aware (if not monitor) their mutual growing attachment. The romantic encounter will eventually occur, but out of the "public" eye, for during a few hours during that particular night, no text messages were exchanged by these two players. This was the only moment they could be considered "off line" with the location aware community of players (with whom they usually exchange many dozens of text messages per day). The next day and for a few days after the usual intense text message activity was resumed with both players discussing and commenting what happened, with different degrees of explicitness and different words according to the correspondents.

What has occurred here? A face to face encounter, but a very singular one, whose occurrence not only involved the coordinated displacements and mutual agreement of both parties, but also a dozen of other players and hundreds of text messages discussing and commenting the event over two weeks. Such a face to face encounter, 'real gattai', must be considered as a public performance and a collective accomplishment. By being produced and displayed as a rare occasion, it contributes to build and reassert the ethos of the location-aware community as one in which one's displacements and positioning with respect to other members is something which is always noticeable and liable to be noticed, and legitimately so (except during the face to face encounter itself) and for which by way of consequence co-proximity and face to face encounters are especially meaningful.

6. From supporting new forms of encounters to design concerns

A key feature of the public order in a location-aware community is the publicity of locational data and the way these can be exploited as interactional resources. Because players' positions (in the absolute, and with respect to one another) are publicly accessible, the game interface makes the noticing of a player's position by others a possible and mundane occurrence. Such noticing is usually performed so as to turn the current location of a given player into a meaningful event (presenting such location as unusual, or remarking on a chance co-proximity), that is worthy of notice. Location becomes a 'mentionable' item that can be discussed between acquainted players. It is a 'safe topic' to initiate or fill an encounter, much as the weather in a rural 'British' village.

The 'noticing format' warrants mentioning his location to the concerned player, and invites further elaboration by the latter. It therefore projects a particular form of mediated encounter, namely a text message interaction. Because such noticing involves the first players making claims about the second player's 'informational preserve' (where he/she is or where he/she stands), to which the latter has 'first epistemic rights', some ritual constraints are operating in such encounters. Their occurrence is possible, legitimate and expected mostly between acquainted players which have constructed a particular sense of familiarity through repeated exchanges in the game. The first turn is usually framed as a carefully crafted question rather than plain assertion so as to let the second player provide the first account of his whereabouts. Though such mediated encounters are routinely performed between familiar players, some repair work and remedial exchanges may be occasionally needed that testify to the moral sensitivity of the publicity of location within that singular 'form-of-life'.

Two types of events are particularly constructed through noticing: unusual locations or mobilities, and screen-based co-proximity of players. We have shown how this led to a specific activity, that of actively crafting the co-proximity and even the contact of the players' icons on the screen maps. Such a specific type of encounter (and practice) has even been given a name: 'cara-gattai' (or doing cara-gattai). Because it is performed so that the proximity of the icons occur without the co-presence of the players' bodies, this gives a particular meaning to face to face encounters within the location-aware community. Since they can be detected by other players, face to face encounters between connected players are treated as public events. They become rare collaboratively accomplished happenings involving many players, meaningful collective rituals that display prominently the features and resources on which a location aware public is built. This is probably a more general

property of location-aware communities. While location awareness supports many forms of encounters, it significantly alters the production and meanings of face to face encounters.

With respect to design issues, our study shows that one of the main focus for design should be the way the location of players is presented within the various interfaces of the game. This is a nexus of tension. On the one hand it is a key resource for the development of game-related encounters (and of the distinctive experience that goes with dwelling in a location-aware community). Therefore one would wish to multiply the formats under which location is made available to the players. An example of that design strategy is the way the designers introduced a feature on the mobile screen map (the 'radar' interface) showing the distance with the closest player, even if the latter was way too far to appear on the map. This innovation illustrates the design strategy oriented towards the providing of new affordances for making visible and noticing game-mediated co-proximity, and the reinforcement of the "infrastructure of encounterability" that characterizes the location-aware game.

On the other hand the way location and displacements are made visible and accessible is a highly sensitive moral issue. Two years ago, the designers introduced a feature which provided the name of the neighbourhood the player was located, along with the other informations which became visible when one clicked on his icon. This feature immediately aroused indignant reactions from the players, who did not want such information to be publicly divulged. Even an information as trite as the name of a neighbourhood district (in a world where 'geometric' locations are already publicly available) might be problematic, for if you know the person well enough, you might more easily tie his/her location thus labelled to some forms of activity relevant to him/her. This proved to be too great an infringement of personal territories. Keeping location data 'geometric' and therefore as 'neutral' and impersonal as possible gives more leeway and legitimacy to the ways acquainted players may notice each others' location, mention it, and collaboratively accomplish various forms of consequent encounters.

The design of the formats under which locational information is made visible, legible and publicly accessible is a two edged process, for whom the determination of proper trade-offs must rely on detailed ethnographic understanding of the interactional resources available and legitimate in a given location-aware public order.

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