“Seing” one another onscreen and the construction of social order in a mobile-based augmented public space The uses of a geo-localized mobile game in Japan.

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Abstract

We present a case study about the uses in Japan of a geo-localised mobile game. The gameplay is that of a collection game where users, which are able to communicate between one another within a game-related text messaging system, must gather sets of related objects, that are both “virtual” and localized (that is accessible only within a given cell). The key feature is a virtual onscreen map that is continuously reset with each server request, and which features geo-localized players and virtual objects within a radius of approximately one kilometer.

This particular interface therefore allows players to “see” one another onscreen. We analyze the interactional conventions that develop through such mediated encounter and more specifically how “seing” one another in this way and the geographical closeness it entails become a pretext to start text-messaging exchanges, even between unknown players. We discuss the ways in which such encounters involving mutual perception on the screen of the mobile phone are still embodied, by analyzing the work users occasionally accomplish to realign the onscreen perspective with their embodied one. We eventually describe some typical interactional patterns that may develop from such onscreen encounters and provide them with meaning, namely apparent civil inattention and lateral noticing by text messaging, or gift-giving practice between experts and newbies.

This case study of an advanced geo-localized game provides a first glimpse of what the experience of living in a mobile-based augmented urban public space might be like, and of the kind of social order that might characterize it.

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 (Esbjörnsson et al., 2004 ; Piekarski and Thomas, 2002 ; Brunnberg and Kulterström, 2002).

Second, the technology provides a screen-mediated space of “mutual awareness”, where the actors' positions are directly related to their real position in space. Mobile screens have thus been used to augment environments and support collective behaviour in experimental contexts such as a university campus (Griswold et al., 2003) or a multiplayer game for handheld devices (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. These systems have three characteristic properties:

- 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 (Barkhuus and Dourish, 2004).

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. The players, most of whom have never met, 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 on a particular type of encounter characteristic of this kind of device: the mediated or 'onscreen' encounter.

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 a large 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[1]. When players are less than about 300 meters[2] 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.
- 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[3]).
- 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.

[1] 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.

[2] 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.

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

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.

It is also possible to log onto Mogi on a PC, from a website. In this case the interfaces and functionalities are different. Players can 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. Finally, the Web interface also has a chat function not accessible on mobile terminals.

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 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.

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[4].

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

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

are particularly attentive to forms of politeness that develop in communities of players and to the proprieties that onscreen encounters have to respect.

3. Onscreen encounters between players in a geolocated electronic space of mutual awareness

Urban sociology has defined the urban sphere as areas in which individuals can find themselves in situations of co-presence, without knowing one another personally, other than through the recognition of their belonging to impersonal generic categories (Lofland, 1998). The encounter between strangers, for instance, is essential in all analytical approaches to decipher the forms of civility characterizing the public sphere. Goffman devoted a large part of his sociology to the minimal forms of interactional regulation in situations of co-presence between strangers (polite inattention) and to the felicity conditions for unexpected encounters to turn into focused interactions (Goffman, 1963).

The Mogi game makes several types of encounter between players possible[5]. We will now consider the very particular form of encounter that occurs when two players see each other on the screen without necessarily seeing each other physically. This is what we call 'onscreen encounters'. Their occurrence makes the mobile screen a new type of public space, one of mutual visibility and mediated co-presence, accessible to all players. Players frequently see their icons next to others on the radar interface when they log on at a distance of less than 500 meters. In which conditions does this 'cognitive recognition' of the other[6] result in social recognition, that is, mutually ratified attention from both sides, based on even minimal interaction?

The screen combines two distinct spaces through geo-localization: the screen space (a mediated space of mutual activity and perception, accessible only to the players) and the ordinary urban public space. The screen space is a form of public space in which players

[5] Players can make contact for the first time when searching for rare objects to barter. This bartering is based on prices that depend on the rareness of the objects but that emerge mainly from their multiple interactions. The encounter is then based on inventories and profiles, and is independent of the players' proximity.

[6] Here, the fact of apprehending him or her as close by and as a player with certain qualities that the interface functionalities make accessible, like the player's level and the objects that he or she is looking for or making available to exchange.

discover one another suddenly, with each server request and consultation of the 'radar' interface. It is a public space of appearance, in the sense of Hannah Arendt, where humans do not simply exist like other living or animated objects, but explicitly make an appearance (Arendt, 1983). In the case of Mogi they appear as icons on the radar map, endowed with certain properties and qualities related to the game and accessible at a click. The suddenness of these appearances is a way of attracting the attention of all the other players. In the following asymmetrical case[7] a player on PC, who has just discovered the position of another known player on his Web map, initiates the interaction by turning towards the probable position of the other player and its possible meanings (the proximity of Haneda airport). The interjection that opens the first turn makes the suddenness of this perception obvious through its exclamatory and interrogative nature and its sequential position at the beginning of the interaction. The first turn at writing is therefore shaped to be accountable as an answer, to a summons which is retrospectively constituted as the fact of noticing a particular position of the other player on one's screen. This provides for a summons-answer sequence on whom further talk is conditionally relevant (Schegloff, 1972). The interrogative interjection initiating the first turn also reflects an orientation towards prior knowledge by the speaker of his or her interlocutor's positions. It makes a previous common experience visible in the form of a conversational opening characteristic of participants who know each other (Maynard and Zimmermann, 1984) and helps to produce the interaction under way as part of a series (Button, 1991).

3.

N : Ah![8] Are you close to Haneda airport?

G : Yes.

N : Are you going to work? You have my sympathy.

G : No, it's for fun.

If the players whose icons suddenly appear at the same time on the screen already know one another, more is expected of them than simply mutual cognitive recognition. They are supposed to take advantage of the onscreen proximity to initiate interaction in the form of an exchange of text messages. This leads to the appearance of a particular form of openness for

[7] In this case only the player on PC 'sees' the other player's position. The latter, who has only a mobile terminal, has no access to large-scale maps on which he or she could 'see' the PC player.
[8] 'are' : an interjection of surprise.

text messaging exchanges, where participants put their geographic proximity into thematic terms rather than simply stating it in a descriptive or declarative way. The first turn modulates the statement that follows it by a marker which tones it down, or by a question ('It seems that…', 'It appears that…', 'not so?'). In each case observed, the respondent treated the first turn as an invitation to confirm this mutual proximity, after which the interaction continued. For the respondent this kind of start triggers a relevant form of reaction (confirming proximity and thus ratifying the initiation of an interaction). The opening of the interaction by an adjacent pair oriented towards enunciation and confirmation of the participants' mutual proximity is a conventional mechanism of openness characteristics of interactions in the geo-localized public space of Mogi.

The possibility of legitimately opening interaction with a message like 'We're close, aren't we?' is based on an experience that crystallizes multiple similar situations. The players have experienced a variety of onscreen encounters either directly or indirectly (when such encounters have been mentioned during chats). This history is set in the device. It can be mobilized again during use of the device in the form of a background of shared expectations concerning the more or less robust way in which the screen representations relate to a real location and can simultaneously be visible to other connected players[9]. This background common to Mogi players makes the possibility of legitimately opening an interaction intelligible, by mentioning the proximity with the player whom one is addressing in writing. The conventional force of this type of openness is based on the 'form-of-life' of Mogi players.

The following interaction, in which one of the players apologizes for not immediately contacting the other one, reflects the strength of this convention and the particular forms, in this mediated context, of the 'pretence of availability' (for interaction).

Extract (2)

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)*:

[9] Context-aware games provide many uncertainties, for instance concerning the geographic references of screen entities (uncertainties related to the positioning system) and the recency of updates (uncertainties related to players' connections and the delays in interactions with the game server). Radically different design strategies are possible, like hiding uncertainties or making them perceptible (Benford et al., 2003).

Hello. I was at Motomachi and at Daikokumachi. 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 Midôsuji 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?

Encounters between strangers are regulated by social protocols because they are potentially dangerous. Mogi serves as a laboratory for analysing the emergence of these conventions and protocols in real time, during 'onscreen encounters'. The possibility of not interacting with another player or, conversely, of the other player not initiating the contact with a text message, is acknowledged by most players. The reasons put forward are the density of connected players in certain areas (too many onscreen encounters) or the strong likelihood of the players being occupied or distracted by something. In that case the onscreen 'encounter' is limited to a hypothetical mutual cognitive recognition, without interaction (unlike polite inattention between passers-by, which is a form of studied indifference and implies a minimum of shared attention). But usually one of the two takes the initiative of sending a text message.

In his analyses of interactions in the public sphere, Goffman described the conditions in which some individuals were 'open' to interaction. This openness to contact with strangers during chance encounters may stem from the participants' particular and obvious status (e.g. children and disabled persons), from their visible role or occupation (e.g. a police officer in the street or a conductor in a railway station) or from the artefacts or people linked to them (e.g. being accompanied by a child, walking a dog, reading a book) and that may act as a legitimate pretext to start a conversation (Goffmann, 1963). In the case of Mogi and onscreen encounters, the players are open to communication with strangers in several respects. The area around their icons on the screen indicates a shared categorical identity: both are players of Mogi and members of the corresponding community. This indicates geographic proximity, likely to turn into relational proximity. Finally, the game attaches certain qualities to the players, accessible by clicking on the person's icon, such as their classification (which distinguishes experts from novices) or the objects they are offering or looking for. These qualities are affordances for initiating an interaction. A convention has developed in which expert players evaluate

whether the 'encountered' player is a novice. When that is the case the expert welcomes the new player with a message and offers them an object to help them progress. This emergent convention combines forms of solidarity characteristic of electronic worlds (e.g. welcoming and helping novices, newbies) with the possibility of basing the relationship on the master and pupil model so deeply entrenched in Japanese culture[10].

Because the game is mediated by a mobile terminal attached to the player, and the icons representing players are geo-localized and featured on a simplified but shared map, 'onscreen encounters' between mobile players who are strangers are different from those between Internauts. The 'onscreen encounters' of mobile players are similar in appearance to those of Internauts (screens, avatars, text messaging, etc.) but are not virtual and disembodied; on the contrary, they engage the players' bodies.

4. 'Onscreen encounters' on handheld devices: between virtuality and face-to-face, under the threat of power games

Most players are extremely sensitive to the distance separating their icon from those of other players in onscreen encounters. The shorter the distance, the more compelling and memorable the onscreen encounter will be. A player whom we interviewed recalled an onscreen encounter in which the two icons touched. He described how he immediately tried to meet the other player's eyes. Not being able to see him, he sent him a message confirming the onscreen encounter as interaction: 'We're very close?'.

Onscreen encounters involve problems of perception. Equipped players are hybrid beings; they perceive the world from their own bodies but also perceive themselves as icons on the map of the radar interface. They combine ordinary subjective perceptions and a particular form of mediated extra-corporeal perception (a bird's eye view of their position and movements on a map). Phenomenology has shown how self-awareness includes different perceptive fields in a whole, without being able to distinguish them simultaneously. Merleau-

[10] In the above textual interaction the two protagonists adopt the positions of master and pupil, respectively, and use formal expressions that suit those roles.

Ponty describes how, by concentrating, one can feel one's right hand touching an object, or one's left hand touching one's right hand (busy touching an object), but not both at once distinctly, although our incorporated perception includes both feelings as a matter of routine, from an invariable perspective[11] (Merleau-Ponty, 1964). Tele-presence, augmented reality or virtual reality extend the lived experience of the body 'here and now' by juxtaposing it with a disembodied experience 'over there'. Living harmoniously in augmented worlds means being able to smoothly integrate the embodied lived experience of the body and the mediated perception of oneself and of the environment (Ihde, 2002). The situation of 'onscreen contact' of icons in Mogi tries the coherence of these two experiences. It introduces a wedge between the disembodied perception of the screen, and the perception of the screen, that the fact of perceiving the other person by sight could immediately remove.

This question of perception is profoundly entangled with that of interaction. Being so close to the other person that the icons touch, or trying the experience of moving together (when one player moves and the two icons remain close, as in the extract below where the players are – or believe they are – in the same train) is a situation treated by the participants as a legitimate pretext to initiate a physical encounter. In that case the inaugural turn is oriented towards an impersonal contextual element (that achieves a degree of anonymity[12]), and an activity categorization displaying the durability and shared character of screen proximity as a way to achieve a minimal form of affiliation through text messaging (Maynard and Zimmermann, 1984). Because this invitation concerns a shared embodied experience (travelling in the same public transport), it is not simply a matter of perceiving but also of interacting, through mutual verbal or visual recognition. This is all the more striking in that physical encounters between

[11] 'I'm always on the same side of my body; it is offered to me from an invariable perspective. But this constant evasion, this inability to superimpose one on the other precisely, the feel of things with my right hand and the feel with my left hand or else, in the exploratory movements of the hand, the tactile experience of a point and that of the "same" point in the next moment – or the auditory experience of my voice and that of other voices –, is not a failure. For if these experiences never overlap entirely, if they slip away just as they are about to coincide, if there is always "leeway" in them, a gap, it is precisely because my two hands are part of the same body. Because it moves in the world, because I stretch out from inside and from outside, I experience, as many times as I want to, the transition and metamorphosis from one experience to the next, and it is only as if the hinge between the two, solid, unshakeable, remained irremediably hidden from me. But this gap between my left hand touched and my right hand touching … is not an ontological void, a non-being; it is bridged by the total being of my body and by that of the world; it is the zero pressure between two solids that causes them to adhere to each other' (Merleau-Ponty, 1964: 192). *[our translation from the French]*

[12] Initiating subjects based on a reference to the context achieves a degree of visible anonymity in relations. The availability of the context to start a conversation does not depend on a shared biographical experience. It is a resource that can be used by anyone to talk to anyone else. This device is therefore used extensively by participants who do not know one another (Maynard and Zimmermann, 1984).

players are rare. When they are proposed (which is fairly frequently, at least by some players) the offer is generally declined. Most players say they avoid them as much as possible.

1. N (07:03:22): ***We seem to be in the same train*[13]*.***

2. M[14] **(07:04:16) :** ***I'm going to look for you! What do you think? In which compartment are you?***

3. N (07:05:49): ***I'm in a compartment with seats grouped into squares of four.***

4. M (07:06:58): ***Ha-ha! Maybe we're not in the same compartment.***

5. N : ***You should be either in the first three compartments, or in the last four.***

6. M (07:10:32): ***In which compartment are you?***

7. N (07:11:27) : ***I'm in the fifth compartment (from the head).***

8. M (07:14:00): ***Ok. That's just behind mine. I'll try to find you.***

9. N (07:16:37): ***No! The fourth is a 'box' compartment.***

10. M (07:19:58): ***I got off at Tsuchiura (like you).***

11. N (07:20:36): ***Bye for now*[15]*.***

12. M (07:31:33) : ***So, that wasn't it, in fact! Go on, enjoy the trip!***[16]

This interaction does not indicate why the two players never met. We have no way of knowing whether they made a mistake, whether they were in the same train, or whether one of them failed to play the game. Both treat the proposal to meet as though it were legitimate, and display a shared effort to succeed. The challenge is to interact in an embodied manner.

If only one of the two managed to see the other one without any interaction, an asymmetry could be created. Players are very sensitive to such asymmetries (being connected with one player only seing the other) for it opens such mediated interactions to forms of electronic

[13] The interaction took place in Ibaraki, some 50km from Tokyo. Since the area is still fairly rural (onscreen encounters between players are certainly less frequent than in the centre of Tokyo), their mode of transport is by train rather than tube.

[14] Mippo's complete nickname corresponds to a particular appearance and identity, that of young women who are *"ganguro"*, i.e. tanned with died blond hair, dressed in the latest fashion, and who stride around the Shinjuku and Shibuya districts in small groups.

[15] *'Goyukkuri'* is a term that can be used when one is leaving an interlocutor or when the interlocutor is moving away, with the connotation of 'enjoy your stay'. Nagisaki uses this term to indicate to Mippo that he is moving away from her.

[16] When Mippo learns that Nagisaki did not alight at Tsuchiura he says that she made a mistake. We can assume that they were probably in the same train but that Mippo mistook another mobile user for Nagisaki who, like her, alighted at Tsuschiura. *'Itterrasshai'* is another term commonly addressed to someone who is leaving. These terms are exchanged when one person is leaving and the other one staying behind (whether for a short or long period of time). Mippo greets Nagisaki with this term since he is carrying on with his trip whereas she is still in the station.

stalking. Onscreen encounter are not risk-free. For philosopher Hubert Dreyfus, the distinction between a situation of co-presence and distant electronic interaction relates to people's vulnerability to embodied risks. The onscreen encounters of Mogi players are not virtual encounters in this sense. They challenge the embodied and perceptual unity of protagonists by making a break possible between shared perception of the co-presence of their geo-localized icons, and mutual perception of their bodies. This tension allows two symmetrical resolutions: disregarding the possibility of direct interaction or, by contrast, ratifying it, that is, transforming the co-presence into a hand-to-hand. We see that the strength of the challenge in the situation increases when the icons are close to each other on the screen. Between these two symmetrical situations the participants are vulnerable to perceptive asymmetries. One, who sees, can have ascendancy over the other, who does not see and cannot see herself being seen. Text messages constitute a resource for dealing with this vulnerability. They allow the player collaboratively to negotiate the definition of the situation, from the firming up of the asymmetry, generating emotion and ascendancy, to the appeasement by restoring the symmetry of perceptive affordances. The players' bodies are constantly at the heart of the trial of the situations and relations that, for Mogi players, constitute the onscreen encounter.

5. Conclusion

With Mogi we have studied a configuration characteristic of shared cooperative public spaces inhabited by mobile, geo-localized participants and articulated to real space (in this study the map of the digital game is articulated to the public urban space of the city of Tokyo). Encounters between participants and the interactional conventions governing them are the basis of ordinary forms of politeness characterizing any public space. The 'onscreen encounter' in which the protagonists are able to perceive their respective icons on the screen map and to share that perception configures a form of encounter peculiar to context-aware cooperative devices like Mogi.

We have analysed how the participants reflexively oriented themselves towards publicizing their spatial position in order to develop specific formats of conversational openness. Through an analysis of written interactions between players, we have also shown how they oriented themselves in relation to potential vulnerability of their personal territories and cooperated to

align or disalign incorporated 'situations' and screen 'situations'. Because the mobile terminal is usually kept very close to a player's body, onscreen encounters engage the participants' bodies. They are more like traffic encounters in ordinary space than like the disembodied interactions of chatting on the Internet.

The collectives that emerge from Mogi use are shaped around interactional formats and forms of civility, gradually elaborated on the basis of both technical protocols and the social protocols governing ordinary space. The conception of suitable interfaces entangles the resources and constraints of design with those characterizing encounters and interactions. The design process can draw on its resources to stimulate encounters. To increase the possibilities of onscreen encounters, the designers have added a functionality that makes the distance of the closest player on the buddylist immediately visible, even if the person is too far away to feature on the screen map. On the other hand, social protocols limit the possibilities of making the players visible on the mobile screen graphic interface. To ensure that their product is not accused of facilitating undesirable or illegal behaviour (players being followed against their will), designers have given Mogi users the possibility of limiting their visibility to a predetermined list of players.

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