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Title of submission: SynchroMate: A Phatic Technology for Mediating Intimacy

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SynchroMate: A Phatic Technology for Mediating Intimacy

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Abstract
By and large interaction design has been concerned with information exchange – technologies for the collection, processing and transmission of informational content. This design sketch discusses preliminary ideas about an alternative way to think about interactive technologies – *phatic technologies* – that are less concerned with capturing and communicating information and more about the establishment and maintenance of social connection. Drawing on insights and inspiration gleaned from a recent field-based study of the role of interactive technologies within intimate relationships we outline our preliminary ideas concerning technologies to support phatic interaction. Using the materials collected during our fieldwork as design inspirations, we developed design sketches for phatic technologies intended to support playful connection between intimates. One of these sketches – *SynchroMate* – is presented. *SynchroMate* is a phatic technology designed to mediate intimacy by affording serendipitous synchronous exchanges.

Keywords
Affect, Concept design, Interaction design, Intimacy, Tactile, Wearable

Problem statement
It is commonplace for artifacts and objects of various kinds to be exchanged as symbols of affection. Love

letters, jewelry, flowers, chocolates and other missives of various kinds are often used as tokens of affection and commitment within intimate relationships. These material objects act to mediate intimacy. While new and emerging technologies such as SMS (Short Message Service i.e. sending a text message via mobile phone), are being appropriated for similar 'gift-giving' purposes [5], there is still much scope for the design of technologies to support intimate relationships, and a growing interest in attempting to do so [1, 3, 6, 7].

Using cultural probes, interviews and focus groups we studied the role of interactive technologies within intimate relationships [6]. Ongoing connectedness was highly valued. Technology was often used for exchanging simple missives and tokens of affection, and for 'idle chatter' about 'nothing in particular'. Frequent exchanges, irrespective of their informational value, were crucial to maintaining these intimate relationships. This work indicated that many interactions between people within intimate relationships have minimal information content. Rather, they primarily serve to maintain contact. The fact of the contact, rather than informational content, was the 'message'. These kinds of exchanges can be thought of as being 'phatic' in character, and we believe the design of intimate technologies should aim to support this kind of communication.

Phatic Technologies: Phatic technologies are technologies specifically designed to sustain social interactions, rather than convey information. Phatic technologies are not concerned with the utility of the interaction, the usefulness of the information, nor the ease-of-use of the device – although each of these may be important for end-user experience. Phatic technologies should be judged by the degree to which they contribute to a feeling of ongoing connectedness. Technologies that support phatic exchanges are similar to devices that support peripheral awareness [1], such as a lamp that glows in one room when a dear friend walks into another room far away. However, whereas awareness devices would tend to support phatic interactions, phatic interactions are not limited to being peripheral. Phatic interactions are often embedded within the routine of everyday life, and so can be focal as well as peripheral.

We have developed the notion of phatic technology to highlight and draw attention to the phatic dimension of communication. Information exchange is not absent from phatic communication and phatic technologies still convey information. The concept challenges interaction designers to find ways to support and encourage phatic exchanges alongside the forms of information exchanges supported by existing devices.

Background

Project Team: This project was conducted by the Interaction Design Group at The University of Melbourne. Our team consisted of several HCI researchers, a sociologist and two students. We also worked with a visual artist and an interaction designer.

Project Dates and Duration: This project began in October 2003 and the work reported here was completed the following year. Following an initial literature review, ethnographically informed fieldwork was conducted. The results of this fieldwork were used to inspire and inform the design of technologies to mediated intimacy in subsequent design activities.

Phatic exchanges, a term first introduced by Malinowski [4] and then adopted by Jakobson [2], do not inform. They do not express any particular thought, nor aim to exchange facts about the world. They do however strengthen social bonds and establish and maintain the possibility of communication. Phatic communication occurs when, for example, comments are made about the weather ('nice day'), inquiries about health ('how do you do?') or affirmation of some obvious state of the world ('we won!').

The phatic dimension is concerned with the process of communication, not its substance. The purpose may be to prolong communication, to discontinue communication, to check whether the communication channel is operational ('Hello, can you hear me?'), to attract attention ('Friends, Romans, countrymen lend me your ears'), or to confirm continued attention ('Are you listening?'; 'Ah-huh') [2]. Phatic acts ensure existing communication channels are open and usable. These interactions maintain and strengthen existing relationships in order to facilitate further communication.

Challenge

During our fieldwork we observed that ongoing connectedness between intimates was highly valued. Simple expressions of affection with notes, emails, and mobile text messages were considered important to the relationship. Such exchanges may have seemed trivial to outsiders, but they were laden with emotional significance to those involved.

We also found significance and meaning in what may appear, too easily to an outsider, as 'idle chatter'. These regular and frequent exchanges, that have little if any informational value, were crucial to the strength of the ongoing social bond. The facility to chat idly and to pass time with someone they cared for was, in itself, a valuable expression of the regard they shared for each other. The substance of their communication was not always important. It was the reassurance that they were connected, that a channel of communication was available to them, and that this somehow strengthened and nurtured the relationship. These phatic exchanges were genuinely valued.

The results of our fieldwork suggested that technologies designed to mediate intimacy should have a number of properties. Ideally they would:

- Allow self disclosure, yet respect privacy;
- Allow communication to be rich in interpretive flexibility, rather than over-determined with communicative redundancy;
- Allows for nuanced and flirtatious exchanges;
- Makes use of received meaning and the private languages that evolve within relationships;
- Enable the feeling of presence in absence, through peripheral awareness mechanisms;
- Allows intimate acts to be aligned with instrumental exchanges, seizing the opportunity to express love in mundane every days acts;
- Allow mutuality, without requiring symmetry or equivalence in the media used for responding;
- Express emotion, not necessarily with words or text, but also in 'unspoken' ways.

Attempting to design for intimacy presents a number of unique and interesting challenges to the designer. Most importantly, we believe, it is crucial for designers to break away from the notion that communicative exchanges must necessarily be about the conveyance of messages, and informational content. For this reason we have coined the term phatic technologies, to emphasize the importance of other, non-informational, forms of exchange.

Many, but not all, of the above design challenges are captured with the phatic technology concept.

Solution

A. Process: An initial literature review was conducted to identify current state-of-the-art research and development and to develop sensitizing concepts to be used in later fieldwork. We then conducted seven weeks of fieldwork with six couples in long-standing, stable, heterosexual relationships; resulting in 42 weeks of ethnographically informed fieldwork data. Our approach to fieldwork combined cultural probes with contextual interviews and focus groups. Participants were encouraged to record and reflect on the form, content and purpose of their communication with each other. They were also asked to imagine alternatives and devices that might improve their interactions.

Phatic Technologies are systems that establish and maintain the possibility of social interactions. These systems are not concerned with capturing and communicating information, but with building and supporting relationships.

The *SynchroMate* fits snuggly in the palm of one's hand. It has a touch sensitive display and a small number of programmable buttons. It encourages serendipitous synchronous interaction by indicating when a message is being composed for you by a distant companion through gentle vibrations and pulsing concentric circles of lush colors on the display.

Materials collected during fieldwork were then used to develop a thematic model that grounded our design concepts [6]. A variety of materials and stories collected from participants were also used to develop scenarios and other inspirational materials that were used in a series of design activities, including brain-storming sessions, a design workshop with HCI experts, and a participatory design workshop with those involved in the study.

B. Solution details: Our observations of the importance of phatic exchanges within intimate relationships prompted the notion of phatic technologies and informed the development of high order conceptual designs. One of these designs is presented below.

Scenario: Tom is working with a colleague when he feels his *SynchroMate* vibrate gently against his wrist. Flipping it into the palm of his hand, Tom sees lush green rings pulsing around the edge of the device. 'Ah,' Tom thinks, 'Sue must be composing a message for me.' Taking a brief moment, he scrawls a series of short, iconic doodles with his fingernail across his *SynchroMate's* screen. As the pulsing of the rings around the edge of his *SynchroMate* reaches a crescendo, he sends his doodling to Sue. The very next instant, he receives a short, brief but sweet, missive from Sue.

***SynchroMate**:* The *SynchroMate* sits snugly in the palm of the hand, invisible if a person has their hand by their side. When someone is composing a message to Tom, the circles on the touch screen change colour according to who that person is. As the sending of the message gets closer the circles start pulsing faster and faster, giving Tom a sense of anticipation and connection to the other person. To increase the synchronous and serendipitous nature of their intimacies, Tom could start to compose a message back at the same time. This would be reflected in Sue's screen at the other end, and so their messages, when sent at the same time, could pass each other in the ether. The screen is touch-sensitive like a PDA but any implement, such as a finger, can be used to write or draw on it. The buttons are tactile, with programmable menus.

The *SynchroMate* is a response to the user study observation that people would receive a message, or phone call, at about the same they were thinking about contacting their partner. Occasionally, partners would send and receive messages simultaneously via SMS or email. The messages seem to 'cross each other in the air'. These coincidences, of receiving a message from someone while simultaneously sending that person a message, had a lasting impact on the couples. The coincidence was attributed with almost metaphysical significance, such as 'a stroke of faith' or 'indicating a special personal connection'.

SynchroMate aims to assist this 'faith' a little and to make this metaphysical event more likely. It supports serendipitous synchronous interaction by exchanging not only the message itself but also that a message is *being* composed. It focuses attention on the mechanics, and fact, of message composition and exchange, rather than on the content of any message. It also affords a certain playfulness and flirtatiousness between people. It becomes possible to 'tease' and flirt with message composition; starting, but perhaps prolonging the eventual transmission of any particular

The *SynchroMate's* buttons may be used by either curling the fingers over the palm (if the device is being used when hidden) or by using the other hand. Messages appear on the *SynchroMate's* screen. Other buttons will be able to send indications of mood, health, or need for a good hug!

message. The *SynchroMate* also allows intimate couples to 'stretch time' by allowing serendipitous moments to last a little longer and to provoke anticipation. It allows for a broad range of playful appropriations.

C. Results: We are currently working to refine and extend the phatic technology concept. To refine the concept, we are developing a set of principles and heuristics for the design of phatic devices. To extend the concept, we are conducting further fieldwork to better understand how technologies are used to mediate close personal and family relationships such as those between grandparents and grandchildren. This fieldwork will be used to further elaborate the phatic technology concept and to inform and inspire the design of future phatic technologies for the extended family.

Our work suggests that people want technologies to help them maintain social connections with friends, family and partners. This has lead to the insight that a fruitful and interesting approach to the design of interactive technologies is one that emphasizes, and prioritizes, social connection over the transmission and reception of informational content. *SynchroMate* is an illustrative instantiation of this insight. It is a product concept for a device that supports and enhances a sense of connectedness within an intimate relationship. The concept of phatic technology places social connection at the forefront of design and suggests a fresh and fertile emphasis for interaction design.

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