

Abstract

X-MSG is a practical research project which seeks to take an unconventional approach to media art and the daily activism of socially and legally displaced groups. We are working on how open source mobile phone technology can intervene in local and marginalised practices in the sex industry by sustaining social formations and organisation within sex work activism. Our research is based on practical experiments with open source mobile telephony software conducted according to the social norms and conditions in the sex industry. In collaboration with the London based sex work collective, x:talk, we have produced an adaptable text messaging network which is presently being trialled for the day-to-day organisation of sex work activism.

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X_MSG

speculations in social software and sex work activism

Alexandra Jönsson and Cliff Hammett

Our curiosity – and hence our investigation – emerged from a question: can social software be designed and deployed in such a manner that it eventually causes power relations to shift in favour of sex workers? Can it do this through aiding their ability to organise, or by creating community? Supporting the daily activism of sex workers from the edges of the social structures they operate in, we have learned that the challenges many sex workers face in attempting to organise are immense. The commercial structures of the sex industry force women from area to area, city to city; a worker might stay for three months or less before moving on to another location. The majority of women who work in indoor prostitution in London are migrants, who normally intend to stay only for two to

three years. The market structure of sex provision pits most women as individual sellers in competition with one another. Like many areas of work, working together as a co-operative tends to be the exception and not the rule. Finally there are the legal restrictions that come with working in the sex industry – including the outlawing of two women working in the same flat together. All of these factors have the potential to work against efforts by sex workers to come together to fight for their interests.

But sex workers do come together, and are more than capable of meeting the challenges that they face. We have been very fortunate to work with x:talk (www.xtalkproject.net), a sex worker-led worker's co-operative who take language and communication as crucial elements in effecting change. They provide English language lessons for people working in the sex industry, taking part in feminist and antiracist campaigns, and fight for the rights of sex workers in local, national and international contexts. Entering this collaboration supports us in overcoming the practical barriers we would have faced in building relationships and trust within the sex industry and gives us access to true expertise in the environment in which we wish to work. We developed our social software through workshops and discussions with x:talk, and they have been the first to put it to active use.

A free media text message server how to exploit commercial services and reinvent the phone

The social software platform that we developed is a many to many text message server, which is capable of redirecting texts to networks of x:talk's members while only costing the sender the price of a single text message.

The system operates via a cheap DIY telephony server. It uses a second hand mobile phone with an “unlimited” texts contract, radically bringing down the charges for operating the system when compared with commercial services. This phone is connected via a USB cable to a recycled computer that operates the server. The server uses open source mobile telephony applications Gnokii (www.gnokii.org) and Gammu (<http://wammu.eu/>) and a MySQL database which stores telephone numbers and distribution lists. These applications interact through a piece of software written in Perl, a multi-purpose programming language that can easily glue together other

applications.

The piece of software we developed works on four main premises, collectively designed with x:talk to be attuned with the social conditions and needs of women in the industry:

- Each individual is completely anonymous, without even having a username.
- Anyone with the telephone number for the system can create a new network.
- Networks can be localised for different language groups.
- Bar the system operator, no one can see what other networks exist.

What this means is that the members of x:talk are able to contact large networks of individuals without giving any details about themselves. They can create networks for different uses; by simply texting a network which doesn't exist, that network is created on the system. What's more, these networks can be configured so any system messages sent are in an appropriate language. This contrasts with some commercial text message service providers, who are unable to offer even support for accented and other special characters used for a great number of languages.

The server software has many comparable analogues in the online world, including e-mail lists, web forums, and services such as Twitter; what most clearly distinguishes the software from these is the technology and contexts into which it can be deployed. More important are its media art forebears such as Mongrel's *Telephone Trottoire* (<http://www.mongrel.org.uk/trottoire>), a polyphonic media construction where new uses of the phone are explored, based on the practice of 'pavement radio' by the Congolese – that is, passing news between individuals on street corners. This underground channel for debate was fabricated into a voicemail system using a 'pass the parcel' model to distribute its messages. It is therefore a concrete example of how telephony can be rewired to reflect different social norms and conventions. A further example is Jean Demar's *Freemob*. This a project investigated the potential of social telephony for border crossers, and provided a core premise of our system – the redistribution of text messages between groups for the price of a single message.

Once an X-MSG server is set up, joining it requires only a mobile phone with credit, the telephone number and a basic knowledge of the commands upon which the system operates. In this regard, the system has a high level of accessibility. It operates precisely at the level of a personal telephone

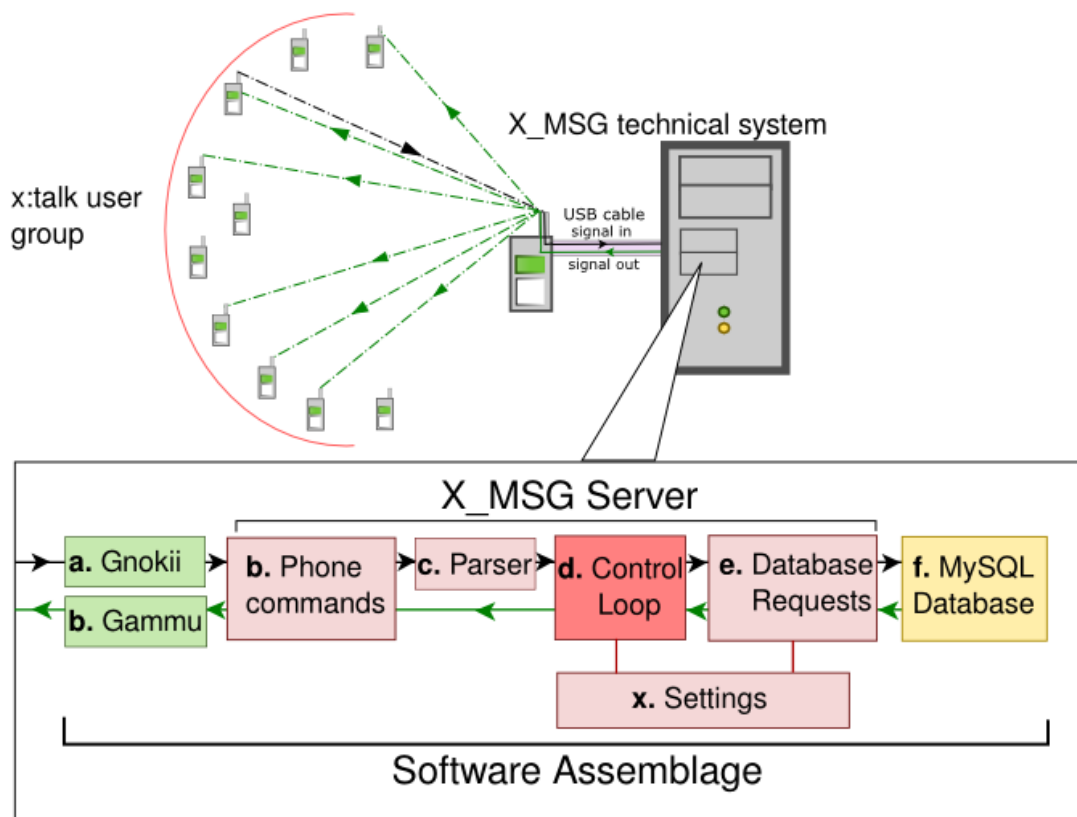
number, in that it is normally something accessible only through networks of trust. This means that in all likelihood the composition of the network will be more or less as the group desires. Of course, this isn't fool proof, but the problem of unwelcome users has been left to be managed primarily through social, rather than strictly technical, protocols.

Software methodologies technical interfaces to social problematics

The X_MSG system performs a number of functions for the x:talk collective by allowing a stream of communication that weaves together other communication structures used in the group. It is mainly used as a short notice communication tool where rapid responses, reminders and alerts are sent out at a low cost. This might not seem like a tool in any importance in itself as it does not carry any inherently significant messages as such, but points to more significant messages in other places within the communication structure, such as email or discussions in meetings. However, exactly because this informal messaging network is not characterised as a 'central' or 'essential' tool, it exposes a specific mode of communication within the group and mediates it through a technical system. It has the potential to reveal something of the politics of the group to the group itself, politics here understood as the micro-political activities of organisation and activism, rather than the wider political objectives of the group. It therefore comprises an autonomous level of organisation in itself, an *interface* as it were, where the politics are defined by speed, cost, quantity, accessibility of the SMS system and not by content. This system adds nothing to the well-developed strategies for informal communication within the social environment of the sex industry; it rather taps into these channels and rewires the technology it appears in, which in this case is the mobile phone.

The technical elements of the system are therefore not neutral politically; while the system does not add content to the work of activists, it has its effects at the level of protocol (Galloway). This is true not just of the system as a whole, but for each component of the software assemblage. (fig. 1) To begin to show this, each component needs to be unpacked.

Fig 1. One possible conceptualisation of the X_MSG system



When a message is received by X_MSG's mobile phone, it is picked up through Gnokii (a.), a free software/open source mobile telephony application designed to enable PCs to interact with and control mobile phones. The X_MSG server itself is a set of scripts written in the programming language PERL. (<http://www.perl.org/>) The Phone Command script (b.) provides tools to utilise and control the Gnokii application, as well as Gammu (g.), a related application that is used here for sending messages back out. This is in turn controlled by the Control Loop script (d.), which uses the Phone Command script to retrieve messages and passes them to the Parser script (c.). The Parser identifies user commands, telephone numbers and the messages themselves from the stream of text data. On the basis of this information, the Control Loop uses the tools provided by the Database Requests script (e.) to update and retrieve data from the MySQL Database. (f.) This database contains three tables of data – a table of member's numbers, a table of networks, and a table which connects members to networks. The Control Loop uses the retrieved data – for example, a list of numbers for a network – to issue instructions to the Phone Command script to send out messages through Gammu. The functions of the Parser, Control Loop and Database

Requests all operate under the system's Settings module (x.) which configures the connection to the MySQL database and all of the language features of the system.

Simple lines of code in the system can have profound political effects. For instance, one line in the Settings module - **use encoding "utf8";** - turns this from a system utilising only Anglo-Saxon characters to one which supports a variety of accents and special characters within it. Prior to us discovering how to enable this, the system would either replace such characters with question marks or – worse – simply omit them all together, reducing phrases in many languages to nonsense. Without this, arguably the system would embody a hierarchy of language, with English being 'default' or 'natural', and all others semi-supported aberrations.

The architecture of other components suggested communication forms in themselves. A key principle of our original system design – that each user can create their own communication networks on the system – does in fact stem from the structure of the relational MySQL database in which this information is stored. Such databases allow for complex many-to-many relationships to be created with ease, allowing multiple users to be members of multiple text message lists with only rudimentary coding required. And while tracing out the web of relations for each component could be an endless task, it should be sufficient to note that the system already has a relationship with other communities – the FLOSS programmers who worked together to create these application – and with the rich social history of each software form.

Such relations means that it makes little sense to place the software components in a fixed hierarchy, as changes in any part can be transformative. Nevertheless, the control loop can still be conceived of as the mother algorithm of the program, administrating where the text message can go and how it is passed through in the system. This is not only 'pure mathematical data', but a complex process of algorithmic interlacing of text message content, mathematical functions, data wrappings and x:talk's social organisation. The programming language Perl, is not only a mathematical language, but also a social organiser, that bring us somewhat closer to what we can consider the 'internal' or autonomous sociability of software. It glues the distinct technologies and components together into an automated system that – crucially – facilitates the social operations between the members of x:talk. Hence, the X_MSG software aims to replace the normative code aesthetics of efficiency, elegance and functionality with an exploration of social aesthetics springing from the relations and

communal exchange between the programmer and the user. This has made it possible for us to tap into an existing informal organisation mode in the x:talk group that relies on a need to send out alerts, re-plan meetings, send reminders etc. Likewise, the software utilises what is already present in its environment, rewiring the organisational mode it finds into a new technology. This is an attempt to subvert technologies by unlocking their potential in experimentation. In addition, it seeks to work with the x:talk collective in order to assist their communication and activism, and integrate our system into those strategies that seek to unlock positions of power and shift those positions to be in favour of sex workers.

Processes social and technical structuring when technical systems speak of social conditions

When a piece of software operates and emerges from a social environment, the boundaries of code and technology are brought into question. The system that is created does not consist only of software, or an assemblage of software and hardware; rather, it is a socio-technical coupling. That is to say that the social protocols under which the X-MSG server is deployed determine its structure as much as the technical protocols of the software program – they are in constant negotiation, at times appearing in tension, at others merging almost seamlessly. What is more, the interaction of the users with the software structures the system technically while also effecting the group's social protocols in themselves.

In theory, the ability for all users to create their own networks within the system allows for the creation of sporadic and freeform communication structures. Users can actively create new lines of contact with each other, rather than relying on a centrally governed form. However, features such as the ability to create networks, while technically present in the system, can turn out to be incompatible with the social protocols or the immediate interests of the group. In our trials with x:talk, this capability has actually been one such feature, meaning that one in-built method by which users can structure the software is actually not present in the X-MSG system as it stands. Unused features of the system do not exist in the system as such – but can be understood as potential features which may be unlocked if the social needs and norms shift.

Gathering up the loose wires

The social software X_MSG interlaces software production with the social activism of sex workers fighting for the right to have a voice. We have supported the work of x:talk from the edges of their daily activism, by speculating in technical models that can assist their organisation and work to empower immigrant sex workers. Hence, the cultural specificity of software has been a central research problematic for us, because the discriminatory practices towards cultures, languages and modes of communication are exposed in the technical system itself. X_MSG does not, therefore, represent the mode of organisation of x:talk, but enters in a dialogue with them where mutually they shape and restructure each other. The complexity of the socio-technical structures that arise from that dialogue heightens critical awareness both in the technical materiality and in x:talk organization that prompts questions for both x:talk and us; how do we deal with open/closedness in the x:talk group? How are we to make sense of the struggle we had just to make the system accept an accented character such as 'é'? These questions assist in critical thinking that can unlock positions of power and shift them in favour of sex work activism, not by sitting within x:talk, but by assisting from the very edges of their activist system.