UNIVERSITY OF BIRMINGHAM

University of Birmingham Research Archive

e-theses repository

3rd of 3 files

Appendices and References

ANALYSING THE DEVELOPMENT, MANANGEMENT AND GROWTH OF INTEGRATED DIGITAL COMMUNITIES

by
ELIZABETH LONGMATE

A thesis submitted to
The University of Birmingham for the degree of
DOCTOR OF PHILOSOPHY

School of Electronic, Electrical
and Computing Engineering
The University of Birmingham
January 2003

APPENDIX A

Communities reviewed for Principle Components Analysis

SeniorNet: (www.seniornet.org) An online community for the 50+ age group. The aim of the community is to provide access to and support for technology. The community also provides an opportunity for members to pass on their knowledge and wisdom. In addition to the online site, SeniorNet also runs learning centres across the US and in New Zealand, where seniors can learn IT skills. Ito et al (1999) report that a sense of affiliation is afforded by inclusion in the 50+cohert. However the interest is not limited to a senior identity and there are over 350 different interest discussion boards. Part of the success of SeniorNet is that it permits strong and numerous links between online and physical space in the form of gatherings (Ito et al, 1999). In a short study it was noted that although 'being a senior' was a term to challenge it also structured a lot of the community activity. For example, the site does not have labelled 'experts' as many online communities have. SeniorNet is felt to be 'knowledge rich' with most people being expert in some aspect of life. Actual experts are seen as members first and experts second.

Christian Union: A group of people who meet to discuss religious issues, pray and study the bible. The group meets regularly and keeps in touch between meetings using a physical notice board and a website.

ParentSoup: (www.parentsoup.com) An online community for parents and those interested in becoming parents or in finding out more information about pregnancy, children and teenagers. A study by Trabak (2000) noted that the majority of ParentSoup members are female and highlighted the social aspect of this community site. Strong relationships had been developed and were based upon multiple relations. Members had even found alternative ways to communicate in case there was ever a problem with the site.

R.a.t.s: A newsgroup devoted to the discussion of daytime soap operas. R.a.t.s is the subject of an extensive study by Baym (1995a; 1995b).

Stop smoking group: A support group for those who wish to give up smoking. Although several different models exist for support groups, including the education only support group (Uzark et al, 1997), this framework uses the model based on mutual peer support.

University Classmates: A group of people who have all elected to follow the same course. The interactions often involve collaboration on group work, social and emotional support and organising social activities.

Long distance learners: A group of classmates who may only meet once during the year and then have to rely on various forms of technology to communicate and collaborate. Haythornthwaite (1998) has studied the development of community in long distance learners.

Virtual work teams: Dispersed, networked teams within organisations. These groups are established to complete tasks when it is not feasible for them to meet in person. Various technologies are used to support such groups, including videoconferencing and CMC. Unlike some communities, the organisation (members and roles) of virtual work teams is already well established and they have clear and defined objectives. As they are time limited, these groups often only develop a few relations based around their objectives. Although Chidambaram (1996) describes relational development over time in computer supported groups. He notes that it takes longer than in face-to-face situations but argues that relations do become more intimate as measured by a sense of group cohesion.

Blacksburg Electronic Village: A community network set up in October 1993. Over 45% of the inhabitants of Blacksburg have access to the electronic village (BEV) from either home or work and there are many public access terminals throughout the town (Carroll & Rosson, 1996). The community site provides access to information about local services and events and there are many sub communities within the BEV, which have

developed their own discussion groups, mailing lists and chat rooms. The aim of the BEV is to increase access to and participation in the local community and many groups, for example, the Church believes that the BEV has increased communication between members. The community also incorporates business and work groups who use the services and the Internet access to complete tasks and to extend their activities beyond the immediate community.

Genealogy group: A group who is interested in tracing family histories and meeting new relations. The group helps each other trace family and provide advice and information on how to establish new lines of investigation. The group occasionally invites guest speakers to the meetings.

Motley Fool: (www.motleyfool.co.uk) An online community concerned with information and education on financial matters. Trabak (2000) found that members typically use the site to learn more about investing and to read expert opinion. Relationships tend to go no further than people sharing a common interest in financial education.

Local Elderly group: A group of elderly people living within a specially allocated housing estate (Zaff & Sloan-Devlin 1998). Amount of interaction between members and components of the physical environment led to a sense of community between members.

Deaf Community group: A group of deaf and hearing people, which supports the needs and interests of deaf people. In addition to regular meetings the group organises evening events and day trips as well as longer excursions.

Barton neighbourhood: A neighbourhood community supporting many different interest groups. The community interacts via periodic parish council meetings, a monthly newsletter and through the village notice boards.

Senior.com: An online community for seniors. Unlike SeniorNet this site is sponsored and there are links to senior targeting insurance companies. The site uses forums, chat

and clubs. Forums are like message boards and members can post messages to sub divided boards. The boards have quite general topic headings apart from 'Departures' which allows members to post death notices and offer condolences. Senior com members also post requests for face-to-face meetings based on close geographical proximity. Chat is the 'heartbeat' of the senior com community and members can also join pre-set clubs which are in fact mailing lists. Feedback on the site, questions, criticism and praise, is made public. Developing a greater sense of community feeling is an explicit goal on the senior com site. Registered users are referred to as other Senior Com members and members are given a free email account.

Phish.net fan community: " Yes we are a community not a fan club." This is a community site for discussion based around the topic of Phish. Phish is an unorthodox band from Vermont. The band allows tapes of their shows to be made and copied. The shows are unique as they are as much about performance as music. It was started for fans and is administered, to the extent that there is any administration, by volunteers. It is primarily a newsgroup (rec.music.phish) although it has extended further into cyberspace through other newsgroups and lots of web sites, chat rooms and mailing lists. The sort of posts that are encouraged include, reviews of shows, tapes and songs, interpretation of lyrics, questions about tapes and tickets. Members also post stories about Phish influenced events in their lives. There are over 60,000 members but there is great sub-division. Unity within the community is based on the values of reciprocity and the sharing of music and information.

Alt.good.morning: A newsgroup which started in 1992 and which does not have a pre-defined topic. Its purpose is friendship and support, combined with a lot of silliness and a strong international presence. The newsgroup requires that messages are posted in the morning, but as they point out 'it is always morning somewhere'. Topics discussed are wide ranging but people tend to avoid posting messages that are likely to stir up controversy or intense debate. Patterson (1996) studied the newsgroup over a 3 month period. She found that the members of the newsgroup were a community i.e., a group of distinct individuals with a shared history, distinct behaviours and with expectations for a

shared future. The group is diverse enough to be interesting and homogeneous enough to engender friendship feelings. AGM is not restricted to Usenet, members also communicate via email, real time chat, snail mail, telephone and increasingly frequent-face-to-face meetings. AGM also has a web site (www.agm.net). This site has an official homepage, birthday lists, photo galleries of individuals and group AGMers as well as personal homepages. Members take on different roles, for example, one person keeps a list of AGMers postal addresses and any AGMer whose address is on the list can obtain a copy. Face-to-face meetings happen on a small scale worldwide and there are also world wide gatherings.

IVillage – the women's network: (www.ivillage.com) A site devoted to solving any woman's problems by utilising the gathered community of smart women, experts and interactive tools. The person to person contact is maintained through boards and chat. The boards relate to both general topics and those focused on women specifically. The boards are very subdivided, although pre-set and demonstrate some elements of human feeling. The chat is either open topic or has a predefined topic and both types are scheduled during the day and have moderators. Members can also post messages to experts or chat to experts online at a predefined time. The tools are 'gimmicky' but are designed to be quick and easy to use. This gives the visitor something to do straight away. The site is heavily sponsored and there are links to online shops. Parent soup is a specific community within iVillage.

Trading communities on eBay: eBay (www.ebay.com) is an online auction site. It serves as a listing agency. Members have to register on the site to buy and sell but transactions are finalised in a one-to-one manner via email, fax or telephone. Person to person contact has been extended in order to facilitate trust and therefore boost sales. Trust and reputation are built upon a system of feedback. There are in excess of 7.7 million registered users on eBay. The site is subdivided into trading categories and within each of these areas the central focus is a shared interest in a particular commodity. Whilst some individuals visit eBay only once or sporadically to buy particular objects there are also core groups of traders in each category area who are there continually and come to know

one another (Kollock, 1999). As a member, you are defined by your interests and your actions, as they are interpreted by others (Alevizou, 1999). However within some trading communities the sense of fellowship is striking (Kollock, 1999). People act as experts and watchdogs, offering advice to newcomers and in some cases donating gifts and money. Face-to-face interaction occurs during eBay tours or between members who share a close geographical location.

Private network communities of AOL members: America Online (AOL) has 14 million members and offers exclusive content to paying customers. With so many members, Hamman (1998) suggests that AOL is more like a city in cyberspace rather than a single community. It consists of thousands of different communities. Hamman (1998; 1999) studied AOL members in order to assess claims that being online led to social isolation and loneliness. His study showed that 75% of participants got an AOL account in order to keep in touch with already established friends or for research purposes. Few people obtained an account with the express intention of making new friends although this did often occur. The communities within AOL are network communities and are based upon individuals rather than groups of people. The participants said that they were members of an online community. The community is a private network community to which they already belonged before they went online.

ACL bulletin board community: The focus of this online community is a single, strong shared concern about a torn Anterior Cruxiate Ligament (ACL) a common and feared injury among sporting people. The bulletin board (http://factotem.com/kneeboard) was started by Bob, a fellow sufferer, in 1996 and forms part of the ACL web site. The site provides factual information, useful links and even videos of the necessary surgery. The bulletin board is less concerned with detailed, factual information and more with empathy and sharing experiences. The messages are posted by fellow sufferers and the communication is open and friendly. People want to share experiences and help each other (Preece & Ghozati, 1998). The messages are very contextual and are not heavily moderated. Membership is transient, most people are newly injured although a few old

timers keep coming back. There was no evidence of face-to-face contact although many members emailed each other directly and provided links to their homepages.

Epinions (www.epinions.com) This is a product advice community. Members can contribute their reviews on particular products as set out by the website. Members can build up reputations as valued and respected reviewers.

Consumer review (www.consumerreview.com) A series of communities focused around a particular product or topic, for example, 'babygear'. Members post messages, rate products, ask expert advice and buy and sell items.

H2g2 (www.h2g2.com) Online version of the hitchhikers guide to the galaxy. Members contribute to an online guide. The guide reflects 'life, the universe and everything' and encourages members to submit interesting entries based around this theme. Members also keep a journal and can exchange ideas with one another (Schenker, 2000).

Vavo (www.vavo.com) This is an online community for the over 45s. Unlike SeniorNet and Senior.com it is based in the UK and has a UK bias in terms of discussion topics and special offers. There are over 105 different topic forums. Members are also interested in campaigning on topical issues and securing special age related deals in, for example, holidays and car insurance (Phillips, 2000).

Coding scheme for rating the communities in terms of the attributes

(1) Guide to multiple relations and rating scheme

1	2	3	4	5
Members are connected by a single tie only		Members are connected by more than one tie but don't communicate across different topics		Members are connected by a number of different ties and communicate across different topics and for different reasons

- Friendships exist across different relations, for example, information exchange, social exchanges and emotional support
- Evidence of relationships existing at different levels for example, colleagues, friends, neighbours
- Communication is across different topics

(2) Guide to voluntary membership and rating scheme

1	2	3	4	5
Members have been obliged to join the community		There is some obligation to join the community		Members have joined the community voluntarily

- No evidence of being obliged to join the community
- Encouragement to new members to join

(3) Guide to informal communication and rating scheme

1	2	3	4	5
Communication is formal		Community contains some informal communication		Community communication is informal rather than formal

- Evidence of less goal-based communication
- Less structured communication
- Informal and colloquial language use

257

(4) Guide to ongoing community and rating scheme

1	2	3	4	5
Community only exists for a short, fixed time period		Some elements of the community are finite but others are longer lasting		Community has no obvious time limit and is ongoing

- Discussions of future plans
- Announcements of upcoming events
- No obvious deadlines for the end of the community

(5) Guide to opportunity for personal investment and rating scheme

1	2	3	4	5
Community does not provide opportunities for personal investment		Community contains some opportunities for personal investment		Community contains many opportunities for personal investment

- Examples of members giving time and content to the community
- Calls for participation
- Requests for assistance

(6) Guide to shared history/context and rating scheme

1	2	3	4	5
There is no archive of community history or sense of shared context		There is some community history within the group		The community has recorded its own history and built up a shared context among members

- References to common or shared activities
- (Searchable) archives
- Posters/displays
- Web pages
- Photos

(7) Guide to strong human feeling and rating scheme

1	2	3	4	5
No sense of human feeling between members		Some sense of human feeling between members		Strong sense of personal regard for fellow members

- Messages contain examples of empathy
- Communication uses first names and is directed
- One-to-one communication

(8) Guide to social identification and rating scheme

1	2	3	4	5
No sense of social identity amongst members		Moderate sense of social identity amongst most members		Strong sense that members belong to the community and define themselves in relation to the community

- Identity signalled through language of messages
- Group names
- Community headings
- Membership cards or logins or ids

(9) Guide to member control and rating scheme

1	2	3	4	5
Community members have no control over their own community		Community members have some but not complete control over community issues		Community members have control over membership issues, topics and activities and can make decisions regarding their community

- Evidence of member roles
- Discussions between members regarding policies and membership issues
- Decision-making between members
- Evidence of resolving disputes

(10) Guide to provided content and rating scheme

1	2	3	4	5
There is no provided content within the community		There is some provided content within the community		The community content is provided by an organisation

- Organisation behind the community provides community materials
- Sponsored material in the community

(11) Guide to homegrown experts and rating scheme

1	2	3	4	5
The community does not contain any homegrown experts		There are some homegrown experts in the community		There are many unofficial or homegrown experts in the community

- Multiple roles
- References to current and/or previous careers and roles outside of the community
- Examples of volunteering expertise
- Direct requests to other members for expertise

(12) Guide to member generated content and rating scheme

1	2	3	4	5
None of the community content has been generated by the members themselves		Some of the community content has been generated by the members themselves		The members of the community themselves have generated the content of the community

- Personal postings
- Member written reports
- Member produced display materials

APPENDIX B

Questionnaire and results for Site A (email list) and Site B (message board)

Site A

1. Are you male or female?

2. How old are you?

3. What country do you live in?

4. Do you use your real name, a nickname or both?

5. Why did you join the group? (chat about HP, make friends, information, other please specify)

6. What is your main use of the Internet? (communication, research, entertainment, other please specify

7. What, for you, is the most important aspect of the Internet? (www, email, chat, newsgroups, MUDS, other please specify)

8. How long ago did you join the group? (<1 week, <1 month, 1 month, 2-3 months, 4-6 months, >6 months)

9. How would you describe your affiliation with the group? (member, oldbie, newbie, lurker, other please specify)

10. Are the discussions easy to follow?

11. Do you look at or use the extra features e.g. votes, quizzes?

12. If you could only keep 1 extra feature which would it be? (calendar, ballot, quiz, document area)

13. Have you set up any extra features?

14. Do you have any other ways of communicating with the other members of the group? If yes please indicate which of the following you use (personal email, letter, phone, face-to-face, chat, other please specify)

15. Do you discuss the group offline?

Site B

1. Are you male or female?
2. How old are you?
3. What country do you live in?
4. Why did you join the group? (chat about HP, make friends, information, other please specify)
5. What is your main use of the Internet? (communication, research, entertainment, other please specify
6. What, for you, is the most important aspect of the Internet? (www, email, chat, newsgroups, MUDS, other please specify)
7. How often do you read the boards? (daily, weekly, occasionally)
8. How would you describe your posting habits? (heavy, regular, occasional, never)
9. Do you consider yourself to be a member of the group?
10. Are the discussions easy to follow?
11. Do you have any other ways of communicating with the other members of the group? If yes please indicate which of the following you use (personal email, letter, phone, face-to-face, chat, other please specify)
12. Do you discuss the group offline?

Email interview- themes

1. Harry Potter community (what is the nature of the community, how does it compare to other communities that you are involved with, do all members feel involved, why do you feel/not feel like a member of the community?)
2. Contact with other members (what is the level of your contact with other members, what do you discuss, have you made friends on the site, did you know anyone on the site before you joined the group, do you meet offline?)
3. Integration (do you discuss the group offline, with whom do you discuss the group offline, do you discuss your physical life with members of the group online?)
4. Problems with the communities (following discussions, moderation)

Results

The number of responses is in parenthesis. Some questions received multiple answers and in these cases the percentages do not add up to 100%.

Site A data (15 people)

Gender	Age	Location	Nicknames
Male (5) 33% Female (10) 67%	<18 (10) 67% 18-25 (2) 13% 26-35 (2) 13% 56-65 (1) 7%	UK (10) 67% USA (4) 27% Philippines (1) 7%	Real name (5) 33% Nickname (5) 33% Both (5) 33%

Reasons for joining	Main use of Internet	Most important aspect of Internet
Chat/exchange ideas about HP (10) 67% To find like minded individuals or make friends (6) 40% To find out information on HP (3) 20%	Communication (7) 47% Research (2) 13 % Entertainment (5) 33 % Teaching tool (1) 7 %	WWW (7) 47 % Email (6) 40 % Research (2) 13 %

How long since joined	Affiliation	Easy to follow	Look/use extra features?
< 1 week (2) 13% < 1 month (1) 7 % 1 month (5) 33 % 2-3 months (5) 33% 4-6 months (2) 13% + 6 months	Member (12) 80% Oldbie (2) 13% Newbie (2) 13% Lurker (3) 20%	Yes (8) 53% No (3) 20% Mostly (1) 7% Sometimes (3) 20%	Yes (13) 87% Mostly (2) 13% Never (2) 13%

Keep only 1 extra feature	Have you set up extra features?	Other ways of communicating with members	Discuss group offline?
Calendar (3) 20 % Ballot (5) 33% Quiz (1) 7% Documents (1) 7% Don't know (3) 20% None (2) 13%	Yes (2) 13% No (13) 87%	Yes (7) 47% No (8) 53% Personal email (7) 47% *Letter (2) 13%* Phone (1) 7% Face-to-face (1) 7%	Yes (7) 47% No (8) 53%

Site B data (17 people)

Gender	Age	Location	Main reasons for joining
Male (2) 12% Female (15) 88%	<18 (1) 6% 18-25 (15) 88% 46-55(1) 6%	UK (1) 6% USA (13) 76% Australia (2) 12% Indonesia (1) 6%	Chat about HP (13) 76% Make friends (6) 35% Information (5) 29% Escapism (2) 12% Aids to teaching (1) 6%

Main use of Internet	Most important use of Internet	How often do you read the boards?	How often do you post?
Communication (10) 59% Entertainment (6) 35 % Teaching tool (1) 6 %	Email (15) 88% WWW (2) 12%	Daily (12) 71% Weekly (2) 12% Occasionally (3) 18%	Heavy (6) 35% Regular (5) 29% Occasional (5) 29% Never (1) 6%

Do you consider yourself to be a member?	Easy to follow?	Other ways of communicating with members?	Do you talk about group outside of the group?
Yes (14) 82% No (2) 12% Don't know (1) 6%	Yes (10) 59% No (0) Sometimes (3) 18% Not all (4) 24%	Yes (14) 82 % No (3) 18% Email (12) 71% Instant messaging (2) 12% Chat (2) 12%	Yes (16) 94% No (1)

APPENDIX C

Instructions for taking part in the SMS-World Cup football group

KEEP THIS INFORMATION IN A SAFE PLACE

Instructions for taking part in the SMS-World Cup football group

> The SMS World Cup football group website can be found at: www.smsfifa.net
>
> The mobile phone number for sending text messages to the website is ▮▮▮▮▮▮

> Your teams: **Ireland and South Korea**
>
> Country codes **IE and KR**
>
> Your goal scoring numbers (**4 and 22**)

1 Introduction and Background Information

Thanks for taking part in this SMS World Cup football group. Its success depends on your active involvement. The idea of the group is to follow the World Cup and to interact with the other group members via SMS and the website. There are two main ways of taking part in the group. The first is by sending messages via SMS to the website. This lets you share your thoughts and opinions with the other group members. You can ask questions, moan about your teams' performances or tell everyone else why your teams are the greatest. Discuss who is going to win the World Cup, who's going to get sent off and who will be picked for the different matches. The second way of taking part in the group is by taking part in the competition. You can claim points based on the teams and player numbers that you have been assigned. The more points you claim the more likely you are to win the competition.

1.1 The World Cup 2002

The World Cup 2002 is taking place in Japan and Korea and there are 32 teams taking part. All the members of this group have been given two teams to support and follow. Your teams are Ireland and South Korea. The ISO country codes for these teams are IE

and KR respectively and you will be known as these codes on the website. For example if you send a text message to the website it will be appear as:

IE/KR: Hiya, did anyone see the game this morning?

In additional all members of the group have been given two player numbers. Your player numbers are 4 and 22. These numbers are independent of your teams. You can follow the fortunes of players 4 and 22 in any team taking part in the World Cup.

1.2 Using the Website - How it Works

When you send a SMS message to the number given in the box at the top of the page it will be picked up by a mobile phone and relayed to a computer. It will then be uploaded to a website. When the website is up and running you will receive a 'welcome' text message to let you know that you can start sending messages. It is important to enter the mobile phone number given at the top of the page into your address book. This will make it easier for you to send SMS messages to the website.

You will be able to read messages on the website and follow the fortunes of your teams and of your fellow group members. You will NOT be able to type messages directly onto website. To send messages to the website you MUST send a SMS.
IMPORTANT: You must only use the mobile phone you have registered with me to send SMS messages to the website. If you use a different phone your messages will not appear on the message board and your claims cannot be recorded in the WINS or the GOALS table. Likewise you cannot send SMS messages from a web service e.g. Genie as we won't be able to detect who the message came from.

1.3 Privacy and Rules

No-one else on the website will know your identity (unless you disclose it) and no-one will have access to your mobile phone number. There are no real rules regarding the content of the SMS messages but I trust that no-one will post any horrible or offensive messages. I reserve the right to hide messages, which I think might cause genuine offence.

1.4 Prizes

There are a number of prizes on offer. Firstly there is the sweepstake prize of £16. This will be given to the person allocated the eventual winner of the World Cup.
Secondly there will be a £5 prize for the winner of the WINS table and there will also be a £5 prize for the winner of the GOALS table (see below for details of the WINS and GOALS tables).

2. Interacting with the SMS-World Cup Football group's Website

The website consists of three different areas. The first is the **chat area** where chat messages appear. The second is the **WINS and GOALS tables**. The third is the **games table,** which provides details of fixtures and results.

2.1 Logging On

To ensure that the site is only used by registered members you will be asked to log onto the website each time you want to check the messages or check your position within the WINS and GOALS tables. You will be presented with a username and password box and you should enter your first country code as your username and the last four digits of your mobile phone number as your password.

| Two letter country code | IE |
| Last 4 digits of your phone number | ■ |

login |

2.2 Receiving Text Messages

During the course of the World Cup you will receive text messages from the site. These messages will be of two kinds.

1) *Alerts:* These will alert you to the fact that the website has been updated or that it is time to fill in an online questionnaire (see section 6).

2) *Relayed Messages:* From time to time messages sent to the board will be forwarded on to the rest of the group. This will give you an opportunity to see the messages straight away.

2.2.1 Replying to Text Messages

When you receive a relayed text message from one of the other members of the group it is quite likely that you will want to reply to it.

IMPORTANT: It is important however to send your reply to the mobile phone number given at the top of the page rather than just replying to the message directly. If you try to reply to the message directly the message will fail to send.

3 Chatting and Sending Chat Messages

Although during the course of the World Cup you will receive a few text messages the main way of interacting is by reading the website and sending text messages to the site. Sending in comments and exchanging thoughts is a key part of the group. I am hoping that everyone will take part in discussions about their teams, the matches and the competition in general. The chat area is the place to exchange ideas & opinions, ask questions and convince us of the merits of your team (or their absolute lack of talent!) Whatever teams you have been assigned and however much you know or don't know about football and the World Cup here is the place to chat.

3.1 How to Send SMS Messages to the Chat Area of the Website

To send a message to the chat area of the website simply send your text message to the mobile phone number given in the box at the top of the page. Your phone number will be recognised and your message will be displayed on the chat area with your country code prefix. The date and time of your message will also be displayed. For example:

267

You send: very tired but very happy with Ireland's performance
It appears as: 6/6 15:00 very tired but very happy with Ireland's performance (post by **IE/KR**)

3.2 How to Reply to a Message on the Website
Messages in the chat area will be numbered. This makes them easier to reply to.
If you want to reply to a specific message you need to include the message number and the prefix **re**

For example if you wanted to reply to message number 5 you would begin your text message re5

re5 they were but why was he sent off?

5.   7/6 16:34 Down to ten men and still France were brilliant (post by **FR/HR**)
6.   7/6 17:23 Did anyone watch the Russia game this morning (post by **RU/CN**)

When you send your reply it will appear underneath the message you replied to and subsequent replies will appear underneath.

5.   7/6 16:34 Down to ten men and still France were brilliant (post by **FR/HR**)
               7. 7/6 18:08 they were but why was he sent off? (post by **IE/KR**)
                         8. 7/6 18:56 cos that tackle was really bad (post by **FR/HR**)
6.   7/6 17:23 Did anyone watch the Russia game this morning (post by **RU/CN**)

3.3 Staying Involved Via Chat
Remember that you can send messages to the group's website whenever you want. The messages do not have to be about your two assigned teams and if and when either or both of your teams are knocked out you can still send in messages about the rest of the tournament.

4 Making claims to league table (WINS and GOALS)
In addition to the chat area there are also two league tables. One table relates to WINS and the other to GOALS. The two tables contain details of the position of each member of this group in relation to the claims they have made. After the final has been played on Sunday 30th June. The winners of the WINS and the GOALS tables will be announced.

4.1 How to make claims to the WINS table
The WINS table relates to the teams you have been assigned (IE and KR).
You can claim points in the WINS table by sending a text message to the website when one of your teams wins (or loses see section 4.1.1). Text messages sent to the WINS table must follow a set format so that they are easily distinguishable from a message being sent to the chat area.

There are two key features of a claims message:
1) The text message MUST begin with the letters **LT** as a prefix, this stands for League Table. If they don't contain this prefix the points will not be awarded.
2) The text message must end with the date of the match e.g. 5 for the 5th of June

Example of claiming a win for Ireland (IE) on 5th June

LT WIN IE 5

If you correctly claim a win for one of your teams then you will be awarded a point in the WINS table.

4.1.1 Blocking other teams
Although it is called the WINS table you can still send in a text message when one of your teams loses. By doing this you have a chance of blocking another team from gaining a point. The secret is to record the fact that your team lost BEFORE the opponent records their win.

Example: Your team South Korea (KR) is playing USA. South Korea loses the match. You send a text message to the WINS table 'claiming' the loss using the format shown below. If you claim the loss by South Korea before USA claim their victory then you will block USA and they will not receive a point. Although you cannot be awarded points for successfully blocking another team it does stop them from getting a point and could assist you in winning the WINS table competition. The number of successful blocks you have made will be recorded in the WINS table.

There are two key features of a claims message:
3) The text message MUST begin with the letters **LT** as a prefix, this stands for League Table. If they don't contain this prefix the points will not be awarded.
4) The text message must end with the date of the match e.g. 10 for the 10th of June

Example of claiming a loss for South Korea (KR) to try and block USA on 10th June

LT LOSE KR 10

IMPORTANT: Claims for losses and wins can only be made on your own teams i.e. Ireland (IE) and South Korea (KR).

4.1.2 How long have I got to claim a win or a loss?
You have got until 23:59 on the day following the match you are claiming for to make the claim. If, for example, you claim the win for Ireland on the 1st of June you have until 23.59 on the 2nd June to claim the win. Claims sent after this time will not be recorded.

4.1.3 What sources can I use to claim a win or a loss?

Many of you will watch the match live, others might watch highlights. Other ways of finding out the information include the Internet, radio and TV. Various mobile phone operators also offer alert systems. See for example ITV's SMS alert service at www.itv-worldcup.com/static/sms/index.html

The top three positions of the WINS table will be shown on the first page of the website. The full table will show everybody's position. There will be a link to the full table from the first page of the website. The full table will also detail information about successful claims and blocks as well as unsuccessful claims and blocks.

4.2 Staying Involved Via WINS Table Claims

Remember that even if one of your teams gets knocked out you can still send in claims to the WINS table for the other.

4.3 How to Make Claims to the GOALS Table

You have also been assigned numbers 4 and 22. These numbers are independent of your teams. If any player wearing a number 4 or a number 22 scores a goal for any team during any of the matches of the World Cup it is possible for you to claim a point in the GOALS table.

Once again it is important to format your claim to the GOALS table correctly. A GOALS message must be distinguishable from a chat message.

There are two key features of a claims message:
1) The text message MUST begin with the letters LT as a prefix, which denotes league table. If they don't contain this prefix the points will not be awarded.
2) It must include the number of the goal scorer and the name of their team.
3) The text message must end with the date of the match e.g. 31 for the 31st of May

Example of claiming a goal for number 4 by France on the 31st May

LT 4 France 31

4.3.1 How long have I got to claim a win or a loss?

As with the WINS table you have until 23:59 on the day following the match to claim the point. Points you have claimed for goal scorers will appear in the GOALS table.

IMPORTANT: Claims for goals can be made for any team using the numbers you have been assigned.

The top three positions of the GOALS table will be shown on the first page of the website. The full table will show everybody's position. There will be a link to the full table from the first page of the website

270

4.3.2 Date Verification
Date and time verification will take place on all claims to prevent any cheating!

4.4 Staying Involved Via GOALS Table Claims
Remember that even if one or both of your teams get knocked out you can still send in claims to the GOALS table for either of your two numbers. These numbers are valid throughout the tournament.

5 Games Table
The games table provides you with information about the matches, the teams and the results. There is a link to the games table from the main page of the website.

5.1 Fixtures and Results
The games table displays all the match fixtures, dates and times. The results of the matches will also be displayed in the games table but not immediately (to prevent any opportunistic cheating!)

5.2 Country Codes
All the ISO country codes for the teams will also be displayed in the games table. This will enable you to look up other people's codes to find out for example that HR is the ISO country code for Croatia.

6 Filling in the Questionnaire
At various time throughout the World Cup I will ask you to fill in an online questionnaire. There will be a clearly marked link to the questionnaire on the website. It will only take a few minutes and points cannot be updated till it's completed ;)

7 Key Points – Important Information to remember
- Use the **LT** format when sending a claim to the WINS or the GOALS table.
- You have until 23:59 on the day following the match to send in a claim for that match
- You can only claim wins and loses for the teams you have been assigned.
- You can claim goals for your two number players for any team in any match in the World Cup.
- If you want to reply to specific messages on the website you must use the format **re** and the number of the message you are replying to.
- If you want to reply to a text message that you have received that must enter the mobile phone number and not just hit reply.
- Finally only use the mobile phone that you have registered with me. Do not use any web service to send SMS messages either. If you have to change phones let me know the new number asap.

7.1 Membership Card
Enclosed is a membership card which contains a summary of the key instructions and information. It includes your teams and numbers, the website URL and the mobile phone

number to which you should send all SMS messages. It also contains a reminder about making claims and if possible you should try and carry it with you at all times.

8 My Contact Details

If you have any questions or problems before or during the World Cup do not hesitate to get in touch with me ██████ ████████ ████████████ ██████████████

YOUR COUNTRY CODES : CM/EC
YOUR NUMBERS : 7, 19

SEND SMS MESSAGES TO ████ ████

WEBSITE : www. smsfifa .net

LOG IN DETAILS : USERNAME CM
PASSWORD ████

WHEN REPLYING TO A SPECIFIC MESSAGE
ON CHAT AREA REMEMBER TO START YOUR
SMS MESSAGE WITH re and the message
NUMBER E·G re5

Membership card (front)

TO CHAT: JUST SEND SMS TO ████ ████████
SMSFORMAT FOR
EXAMPLES OF CLAIMS TO WINS TABLE
  LT WIN CM 1/6   1
  LT LOSE EC 3/6   3
EXAMPLES OF CLAIMS TO GOALS TABLE
  LT 7 FRANCE 31/S   31
  LT 19 POLAND 4/6   4
WHEN REPLYING TO A SMS REMEMBER TO
REPLY TO THE NUMBER ██████████ AND
NOT DIRECTLY TO THE MESSAGE ITSELF

Membership card (back)

Web pages from SMS World cup football website
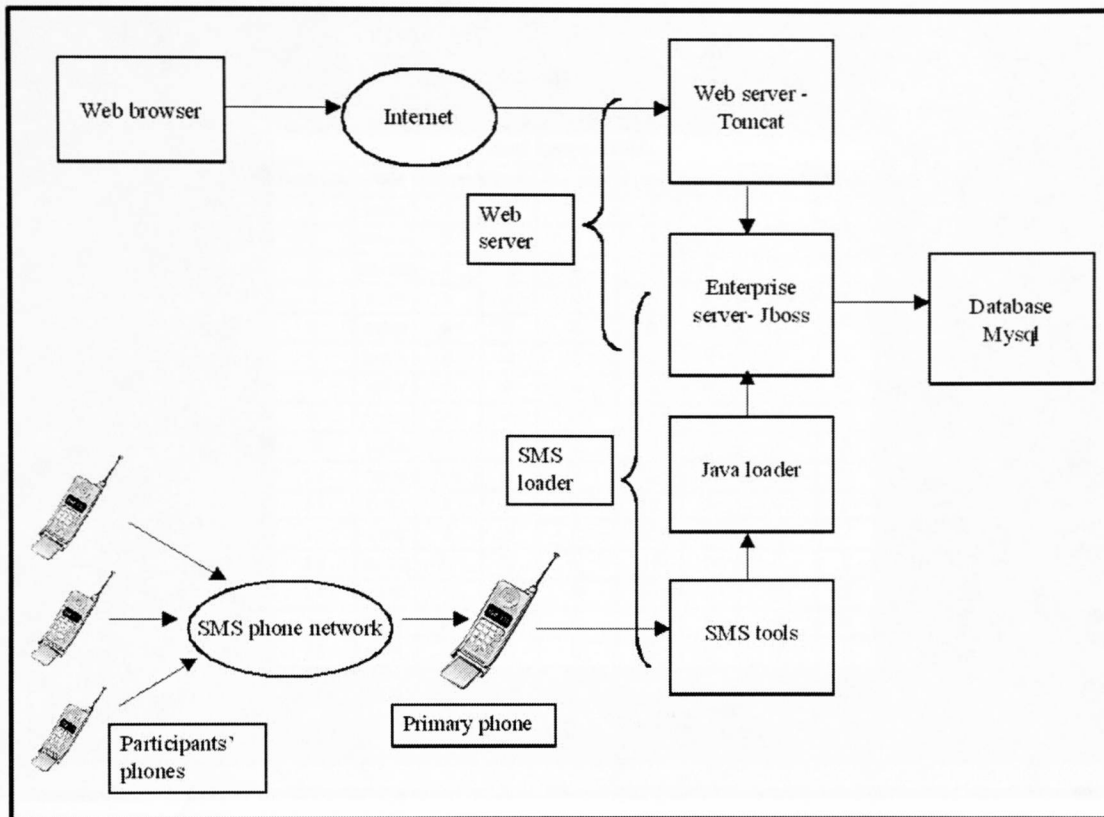
SMS-Web architecture

Webserving: The webserver (supporting jsp, filters and servlets) was Tomcat. The Enterprise Java Bean (EJB) server was Jboss, handling the pooling of connections and controlling the bean resources. The Jboss and Tomcat combination eases the creation of a scalable authenticated dynamic database driven website such as this.

Loading of text messages: The 'SMS tools' (Frings, 2002) package was used to send and retrieve the messages from the phone. The retrieved messages were put into a queue and loaded by a java application via an EJB within Jboss.

File Edit View Tab Settings Bookmarks Go Tools Help

Back Forward Reload Home [130] http://www.fifa.net/goalTable.jsp

SMS World Cup Football Group

Goal League Table

Position	Code	Player	Score	Possible	Player	Score	Possible	Total
1	sr/bu	9	26	0	17	3	0	29
2	cm/de	7	11	0	19	7	0	18
3	en/mx	9	16	0	17	1	0	17
4	it/tn	5	3	0	21	5	0	8
5	es/uy	6	6	0	20	1	0	7
6	tc/za	8	4	0	18	3	0	7
7	ie/kr	4	2	0	22	4	0	6
8	py/sn	10	4	0	16	0	0	4
9	ga/dk	7	3	0	19	0	0	3
10	de/us	10	3	0	16	0	0	3
11	fr/hr	8	2	0	18	0	0	2
12	tr/ng	6	2	0	20	0	0	2
13	ru/cn	11	2	0	15	0	0	2
14	pl/si	5	0	0	21	0	0	0
15	ge/be	11	0	0	15	0	0	0
16	pt/cr	4	0	0	22	0	0	0

Done.

Goals Table

Games Table

File Edit View Tab Settings Bookmarks Go Tools Help

Back Forward Reload Home | 100 | http://.../WinsTable.jsp

SMS World Cup Football Group

		Wins League Table			
Position	Code	Claimed block	Successful block	Claimed win	Score
1	br/za	1	1	25	22
2	de/us	0	0	17	14
3	ie/kr	1	0	18	14
4	es/uy	1	0	14	11
5	jp/dk	1	1	14	10
6	ar/sa	4	4	10	10
7	cn/na	1	1	15	9
8	ru/cn	5	3	9	9
9	tr/ng	2	1	8	4
10	py/sn	1	1	5	4
11	cm/ec	3	2	6	3
12	fr/hr	2	1	4	2
13	tl/ta	3	2	4	1
14	pl/cr	0	0	0	0
15	pl/xt	0	0	0	0
16	se/be	0	0	0	0

Done

Wins Table

APPENDIX E

SMS-Web Questionnaires

Name.. Age...............

Occupation..

Mobile phone number: ....Email address:..

	Not interested at all				Very interested
1. Please rate your interest in football	1	2	3	4	5
2. Please rate your interest in the World Cup 2002	1	2	3	4	5
	Not at all knowledgeable				Very knowledgeable
3. How knowledgeable are you about football?	1	2	3	4	5

4. Do you have a favourite team taking part in the World Cup 2002? Yes ☐ No ☐

If **yes** please state which team.............................

5. Which statement best matches your feelings of affiliation with the teams you have been assigned?

	Sweden (SE)	Belgium (BE)
I am a big fan of the team	o	o
I am interested in the team	o	o
I am moderately interested in the team	o	o
I have no particular feelings for the team	o	o
I am not too keen on the team	o	o
I actively dislike the team	o	o

	Not at all knowledgeable				Very knowledgeable
6. How knowledgeable are you about Sweden (SE) football team?	1	2	3	4	5
7. How knowledgeable are you about Belgium (BE) football team?	1	2	3	4	5

8. On average how often do you send text messages?
More than once a day ☐ Once a day ☐ Once or twice a week ☐ Less frequently ☐

9. How do you pay for your mobile phone?
Pay as you go ☐
Contract (either monthly/annually) ☐

10. If contract, do you receive free talk minutes Yes ☐ No ☐ **free text messages?** Yes ☐ No ☐

11. How much does it cost to send a text message?...................................

12. Have you got predictive text input on your phone? Yes ☐ No ☐ Don't know ☐
13. How long have you been using the Internet? <1year ☐ 1-3 years ☐ >3 years ☐
14. Which statement best matches your use of the Internet? I am logged on most of the day ☐

I log on several times a day ☐ I log on once a day ☐ I log on once or twice a week☐ less often ☐

Please enter your first name [   ]

	Not at all Interested 1	2	3	4	Very Interested 5
1. Please rate your current interest in football	○	○	○	○	○
2. Please rate your current interest in the World Cup	○	○	○	○	○

	Not at all knowledgeable 1	2	3	4	Very knowledgeable 5
3. Currently, how knowledgeable are you about football?	○	○	○	○	○

4. Which statement best matches your current feelings of affiliation with the two teams you have been assigned?

	select your 1st assigned team	select your 2nd assigned team
I am a big fan of the team	○	○
I am interested in the team	○	○
I am moderately interested in the team	○	○
I have no feelings for the team	○	○
I am not too keen on the team	○	○
I actively dislike the team	○	○

5. At this moment in time how knowledgeable are you about the two teams you have been assigned?

	Not at all knowledgeable 1	2	3	4	Very knowledgeable 5
select your 1st assigned team	○	○	○	○	○
select your 2nd assigned team	○	○	○	○	○

6. Which groups are your two teams in?

select your 1st assigned team	Group	cannot remember
select your 2nd assigned team	Group	cannot remember

7. Thinking about the SMS-World Cup Football group, please indicate your agreement with the following statements

Statements	To a very little extent	To some extent	To a very great extent

279

I like finding out more about the other people in the group	○	○	○	○	○	○	○
I like finding out more about football and the World Cup through the SMS messages and the website	○	○	○	○	○	○	○
I send SMS messages after reading the messages on the site	○	○	○	○	○	○	○
I send SMS messages after watching a match	○	○	○	○	○	○	○
I send SMS messages after reading/hearing a match report	○	○	○	○	○	○	○
I am more likely to send a message to the site after receiving a text message	○	○	○	○	○	○	○
I reply to existing messages but wouldn't start a discussion myself	○	○	○	○	○	○	○
It was easy to get a sense of personal contact through the SMS messages	○	○	○	○	○	○	○
It was easy to get an idea about other members' personalities through the SMS messages	○	○	○	○	○	○	○

14. Please choose one statement that most closely matches your own preference

I prefer claiming points and blocking points to sending messages to the message board	○
I prefer sending messages to the message board rather than claiming and blocking points	○
I enjoy both sending messages to the message board and claiming and blocking points	○

15. Are you aware of the identities of any other members of this group? Yes ○ No ○

If yes please enter their name(s) and (if you know them) their teams below

Name	Team1	Team2
	I don't know their first team	I don't know their second team
	I don't know their first team	I don't know their second team
	I don't know their first team	I don't know their second team
	I don't know their first team	I don't know their second team
	I don't know their first team	I don't know their second team
	I don't know their first team	I don't know their second team
	I don't know their first team	I don't know their second team
	I don't know their first team	I don't know their second team

	All	Nearly all (missed 1 or 2)	About half	A few (missed most)	None
16 Please indicate how many matches (involving any teams) you have watched so far	○	○	○	○	○
17 Please indicate how many of your teams' matches you have watched so far	○	○	○	○	○

18. Have you watched ALL of the following matches?

a) England's matches Yes ⬤ No ⬤

b) Your favourite team's matches Yes ⬤ No ⬤ I don't have a favourite team ⬤

19. Please indicate which information sources you have used when making claims to the WINS and to the GOALS tables

(If you have not made any claims tick here ☐)

Watched the match live	☐
Watched the match highlights	☐
Heard on radio	☐
Newspaper	☐
Someone told me (face-to-face)	☐
Someone told me (via email)	☐
Someone told me (via phone call)	☐
Someone told me (via SMS)	☐
Internet	☐
Text message alert	☐
Other (please state)	

20. Please indicate which other people (not members of this SMS-football group) you communicate with about the World Cup

and your methods of communication

	Face-to-face	Landline call	Mobile call	SMS	Email	Internet discussion
Friends	☐	☐	☐	☐	☐	☐
Family	☐	☐	☐	☐	☐	☐
Work Colleagues	☐	☐	☐	☐	☐	☐
Strangers	☐	☐	☐	☐	☐	☐
Other (please state)	☐	☐	☐	☐	☐	☐

submit

Please enter your first name

	Not at all Interested 1	2	3	4	Very Interested 5
1. Please rate your current interest in football	○	○	○	○	○
2. Please rate your current interest in the World Cup	○	○	○	○	○

	Not at all knowledgeable 1	2	3	4	Very knowledgeable 5
3. Currently, how knowledgeable are you about football?	○	○	○	○	○

4. Are either of your teams still in the tournament? Yes ○ No ○ If YES please indicate below which statement best matches your current feelings of affiliation with your remaining team(s)

	My 1st team is already out of the WC	My 2nd team is already out of the WC
I am a big fan of the team	○	○
I am interested in the team	○	○
I am moderately interested in the team	○	○
I have no feelings for the team	○	○
I am not too keen on the team	○	○
I actively dislike the team	○	○

5. Thinking about the SMS-World Cup Football group, please indicate your agreement with the following statements

Statements	To a very little extent		To some extent			To a very great extent	
	1	2	3	4	5	6	7
I feel that I belong to this group	○	○	○	○	○	○	○
I am happy to be part of this group	○	○	○	○	○	○	○
I do NOT see myself as part of this group	○	○	○	○	○	○	○
I am enthusiastic about this group	○	○	○	○	○	○	○
I feel that I am a member of this group	○	○	○	○	○	○	○
I am NOT content to be a part of this group	○	○	○	○	○	○	○

6. Please describe your affiliation to the SMS-World Cup Football group? (Tick all those that

282

apply)

I am an active member	☐
I feel involved with the SMS football group and the other teams	☐
I am starting to get involved	☐
I am a lurker (I look but I don't send messages)	☐
I get involved when it suits me	☐
I don't feel involved at all	☐

	Message Board	WINS Table	GOALS Table	Games Table
7. Please indicate which features of the website you look at (tick all that apply)	☐	☐	☐	☐
8. Please rank the features of the website according to how much time you spend looking at them. (1=most time & 4 = least time)	4	4	4	4
9. Please rank the features of the website according to how interesting you think they are. (1=most interesting & 4 = least interesting)	4	4	4	4

10. Please indicate how often you look at the smsfifa.net website

I look more than once a day (Logged on to the site all day)	⊙
I look more than once a day (Log in several times a day)	⊙
I look once a day	⊙
I look once or twice a week	⊙
I look once a week	⊙
I look less often	⊙

11. Please indicate the level to which you feel the following statements are true by marking the appropriate button

Statements	To a very little extent		To some extent			To a very great extent	
	1	2	3	4	5	6	7
I enjoy taking part in the SMS discussions	⊙	⊙	⊙	⊙	⊙	⊙	⊙
I like providing information for the other group members	⊙	⊙	⊙	⊙	⊙	⊙	⊙
I like finding out more about the other people in the group	⊙	⊙	⊙	⊙	⊙	⊙	⊙
I like finding out more about football and the World Cup through the SMS messages and the website	⊙	⊙	⊙	⊙	⊙	⊙	⊙
I send SMS messages after reading the messages on the site	⊙	⊙	⊙	⊙	⊙	⊙	⊙
I send SMS messages after watching a match	⊙	⊙	⊙	⊙	⊙	⊙	⊙
I send SMS messages after reading/hearing a match report	⊙	⊙	⊙	⊙	⊙	⊙	⊙
I am more likely to send a message to the site after receiving a text message	⊙	⊙	⊙	⊙	⊙	⊙	⊙

I reply to existing messages but wouldn't start a discussion myself	○	○	○	○	○	○	○
It was easy to get a sense of personal contact through the SMS messages	○	○	○	○	○	○	○
It was easy to get an idea about other members' personalities through the SMS messages	○	○	○	○	○	○	○

12. Can you name a frequent poster to the message board (other than yourself)?	I can't think of a frequent poster to the message board
13. Can you name a competitive person (other than yourself) within the group?	I can't think of a competitive person in the group
14. Approximately what percentage of the SMS football group do you think is male and what percentage female?	Male Please select Female Please select
15. Who won the offside competition?	I don't know who won the offside competition

16 Approximately how many messages are there currently on the message board area of the website?

50-75 messages	●
75-100 messages	○
100-125 messages	○
125-150 messages	○
150-175 messages	○

17. Since you filled in the 1st questionnaire have you discovered any further identities of group members?
Yes ○ No ○

If yes please enter the details of the newly discovered identities below

Name	Team1	Team2
	I don't know their first team	I don't know their second team
	I don't know their first team	I don't know their second team
	I don't know their first team	I don't know their second team

	All	Nearly all (missed 1 or 2)	About half	A few (missed most)	None
18 Please indicate how many matches (involving any teams) you have watched so far	○	○	○	○	○
19 Please indicate how many of your teams' matches you have watched so far	○	○	○	○	○

20. Have you watched ALL of the following matches?

a) England's matches Yes ⬭ No ⬭

b) Your favourite team's matches Yes ⬭ No ⬭ I don't have a favourite team ⬭

submit

Questionnaire 3 - The last one

Please enter your first name [   ]

1. Please indicate the level to which you feel the following statements are true by marking the appropriate button

Statements	To a very little extent		To some extent			To a very great extent	
	1	2	3	4	5	6	7
I have enjoyed taking part in the SMS discussions	○	○	○	○	○	○	○
I liked providing information for the other group members	○	○	○	○	○	○	○
I liked finding out more about the other people in the group	○	○	○	○	○	○	○
I liked finding out more about football and the World Cup through the SMS messages and the website	○	○	○	○	○	○	○
I sent SMS messages after reading the messages on the site	○	○	○	○	○	○	○
I sent SMS messages after watching a match	○	○	○	○	○	○	○
I sent SMS messages after reading/hearing a match report	○	○	○	○	○	○	○
I was more likely to send a message to the site after receiving a text message	○	○	○	○	○	○	○
I replied to existing messages but didn't start a discussion myself	○	○	○	○	○	○	○
It was easy to get a sense of personal contact through the SMS messages	○	○	○	○	○	○	○
It was easy to get an idea about other members' personalities through the SMS messages	○	○	○	○	○	○	○

	Not at all Interested 1	2	3	4	Very Interested 5
2. Please rate your current interest in football	○	○	○	○	○
3. Please rate your overall interest in the World Cup	○	○	○	○	○

	Not at all knowledgeable 1	2	3	4	Very knowledgeable 5
4. Currently, how knowledgeable are you about football?	○	○	○	○	○

5. Thinking about the SMS-World Cup Football group, please indicate your agreement with the following statements

Statements	To a very little extent	To some extent	To a very great extent

	1	2	3	4	5	6	7
I felt that I belonged to this group	○	○	○	○	○	○	○
I was happy to be part of this group	○	○	○	○	○	○	○
I did NOT see myself as part of this group	○	○	○	○	○	○	○
I was enthusiastic about this group	○	○	○	○	○	○	○
I felt that I was a member of this group	○	○	○	○	○	○	○
I was NOT content to be a part of this group	○	○	○	○	○	○	○
A sense of community exists within this group	○	○	○	○	○	○	○

6.Please describe your affiliation to the SMS-World Cup Football group? (Tick all those that apply)

I have been an active member	☐
I have felt involved with the SMS football group and the other teams	☐
I was starting to get involved	☐
I was a lurker (I look but I don't send messages)	☐
I got involved when it suits me	☐
I didn't feel involved at all	☐

7. Please indicate the level to which you feel the following statements are true by marking the appropriate button

Statements	To a very little extent		To some extent			To a very great extent	
	1	2	3	4	5	6	7
I have enjoyed taking part in this group	○	○	○	○	○	○	○
I have got more out of the World Cup by being involved with this group	○	○	○	○	○	○	○
I have watched more matches involving my assigned teams than I would have done had I not been involved in this group	○	○	○	○	○	○	○

8. Please indicate which statement best describes the extent to which your involvement in this group has affected the amount of football matches you have watched on the TV or followed i.e. on radio/Internet

Being in this group has meant I've watched/followed many more matches than I would have done otherwise.	○
Being in this group has meant I've watched/followed a few more matches than I would have done otherwise.	○
Being in this group has not meant I've watched/followed any more or any fewer matches than I would have done otherwise.	○
Being in this group has meant I've watched/followed fewer matches than I would have done otherwise.	○

9. Please indicate below the extent to which your involvement in this group has affected your interest in the World Cup

Being in this group greatly increased my interest in the World Cup.	○

Being in this group increased my interest in the World Cup to some extent	○
Being in this group neither increased nor decreased my interest in the World Cup	○
Being in this group decreased my interest in the World Cup	○

10. Rate the following features in terms of how much you liked them

	Didn't like at all 1	2	3	4	Liked a lot 5
The offside competition	○	○	○	○	○
Team sharing for the Quarter Finals	○	○	○	○	○
Voting for best player	○	○	○	○	○
Relaying SMS messages sent to the website on to all members of the group	○	○	○	○	○

11. During the World Cup did you discuss the SMS-football group with anyone else? Yes ○ No ○

If yes please indicate below along with your methods of communication

	Face-to-face	Landline call	Mobile call	SMS	Email	Internet discussion
Other SMS football group members (i.e. in private and not on message board)	☐	☐	☐	☐	☐	☐
Friends	☐	☐	☐	☐	☐	☐
Family	☐	☐	☐	☐	☐	☐
Work Colleagues	☐	☐	☐	☐	☐	☐
Other (please state)	☐	☐	☐	☐	☐	☐

12. Since you filled in the 2nd questionnaire have you discovered any further identities of group members? Yes ○ No ○

If yes please enter the details of the newly discovered identities below

Name	Team1	Team2
	I don't know their first team	I don't know their second team
	I don't know their first team	I don't know their second team

13. Finally whether you have enjoyed taking part or not can you conjure up a sentence or two on why?

Thanks

submit

APPENDIX F

Text messaging diary and social network questionnaire

Instructions for filling in your SMS diary

Every time you send or receive a text message during the next 10 days I would like you to make a note of it and record it by answering a few simple questions about the message. I would like you to keep the diary for 10 days or until you have recorded 20 messages whichever happens sooner. Remember to try and carry on text messaging as normal and not to let the diary influence your text messaging behaviour.

An example of how to fill in your diary is given below.

Diary Entry   Date: / /   Sent message ☐   Received message ☐

Name of communication partner ....

Length of message: Less than 1 line ☐ 1-2 lines ☐ 3-4 lines ☐ More than 4 lines ☐

Time of day when message sent/received: Morning ☐ Afternoon ☐ Evening ☐

Your location when message was sent or received:

Home ☐   Travelling ☐   Pub/Café/Restaurant ☐   Work/College/University ☐   Other ☐

Was the message for: Immediate use ☐   or for future reference ☐

What was the content of the message? Tick as many boxes as appropriate or feel free to describe the content in your own words

Greetings message ☐   Joke ☐   Reminder ☐   Planning/organisational ☐   Insult ☐

Offering/ receiving/asking for advice   Offering/ receiving/asking for information ☐

Own description ....

Was the message related to:
Another text message ☐   A face-to-face conversation ☐   A mobile phone call ☐

A Land line phone call ☐   Unrelated to any previous communication ☐

Was the communication:

A single message ☐   A single message and reply ☐

Social network Questionnaire

Looking back over your diaries I have identified all the people that you have communicated. This includes both the people you sent messages to and those whose messages you received. I would be grateful if you could complete the following short questionnaires about these communication partners. You will need to fill in a separate entry for each of your communication partners (I have already added in their names).

Name of communication partner ....

Type(s) of relationship (tick as many as appropriate or describe in your own words under the 'other' category)

Friend   ☐ Neighbour/housemate   ☐
Fellow course member   ☐ Family member   ☐
Work colleague   ☐ Team member (sports, hobbies, projects)   ☐
Casual friend or acquaintance   ☐ Supervisor/Teacher/Lecturer   ☐

Other (please state) ....

Would you describe your relationship as Very close ☐   Close☐   Quite close ☐   Not close☐

How long have you known this person?

Less than 3 months☐   3months – 1 year ☐   1-3 years ☐ Over 3 years ☐

How many other people in your diary does this person know?

None ☐ One or two ☐ Most of them ☐ All of them ☐

What is the location of this person (usually) relative to you? Same building ☐ Same town ☐ Different town ☐

How else do you communicate with this person? Tick all the methods that are appropriate.

Face-to-face ☐ Mobile phone call ☐ Email ☐ Land line phone call ☐

No other way of communicating with this person ☐

Please turn to next page to fill in details of your other communication partners

Telephone interviews discussion guide

1. Mobile phone use
Reasons for buying a phone, attitudes towards the phone (positive and negative features)

2. SMS use
Attitudes towards SMS (best features, limiting features)
Typical SMS use (when, where, how often, with whom)

3.Community membership
What communities do you belong to?
What is function, purpose of the community?
How long have you been a member, who else belongs to the community?
Perceptions of community membership and involvement

4. Communication within communities
How do you communicate with other members of your communities?
Relative importance of face-to-face versus technology mediated communications

5. Role of SMS in communities
When used, why useful

APPENDIX G

Group Identity – Perceived Cohesion scale

Background to the scale

Cohesion encompasses an individual's sense of belonging to a particular group and his or her feelings of morale associated with membership in the group. Belonging is viewed to comprise both cognitive and affective elements developed through experiences with the group while morale is a primarily global affective response associated with belonging to the group. It comprises two dimensions: Sense of belonging (1,3,5) and Feelings of morale (2,4,6)

Please indicate (by means of circling) the extent to which you agree or disagree with the following statements.

Statements	**To a very little extent**		**To some extent**			**To a very great extent**	
	1	2	3	4	5	6	7

I feel that I belong to this group
I am happy to be part of this group
I do NOT see myself as part of this group
I am enthusiastic about this group
I feel that I am a member of this group
I am NOT content to be a part of this group

The scale was presented three times where the 'group' in question was altered as below:

Group = Student population

Group = Birmingham University

Group = Interactive Systems Community

APPENDIX H

Individual group data for coursework over semesters 1 and 2

Group	Semester 1			Semester 2		
	SMS and email use	Team evaluation	Group mark	SMS and email use	Team evaluation	Group mark
1	Low	Medium	69	High	High	83
2	High	High	55	High	High	72
3	High	Medium	58	High	High	55
4	Medium	Medium	72	High	Medium	61
5	Medium	Medium	70	High	High	82
6	Low	Low	56	Medium	High	60
7	Medium	Medium	56	Medium	Medium	64
8	Low	Medium	49	Medium	High	65
9	Low	Low	48	Medium	Medium	54
10	Medium	High	68	Medium	High	82
11	High	Medium	56	High	Medium	56
12	Medium	High	20	High	High	50
13	Medium	Medium	82	Medium	Medium	71
14	Low	High	35	Medium	High	50
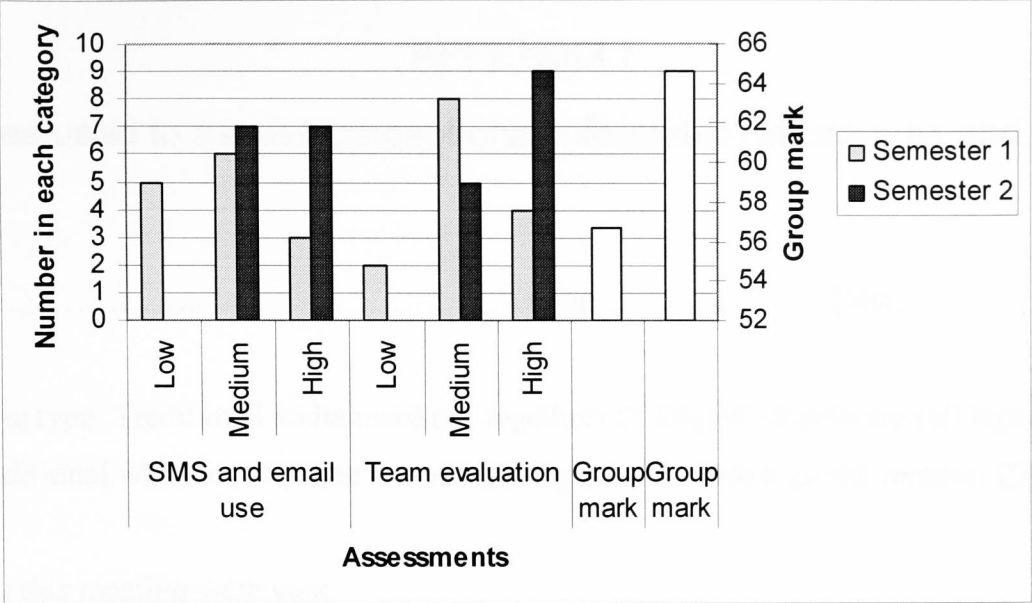
Graph showing SMS and email use, team evaluation and average group marks across Semesters 1 and 2

APPENDIX I

Scales used to assess perceptions, information exchanges and roles

Name..Group......................Date....................

Meeting type: Traditional whiteboard (all together) ☐ Digital whiteboard (all together)
☐ Traditional whiteboard (some remote) ☐ Digital whiteboard (some remote) ☐

During this meeting were you:

Either- In the same room as the traditional/digital whiteboard ☐

Or- In a different room to the traditional/digital whiteboard ☐

1. Please consider the following communication characteristics of the entire meeting environment you used today and circle the point along the scale that you consider to be the most appropriate. Work quickly and do not return to previously completed responses (scale 1-7) e.g. see below

	1	2	3	4	5	6	7	
Good	o	o	o	o	o	o	o	Bad

Inaccessible-Accessible

Distorted-Accurate

True-False

Pleasurable-Painful

Meaningless-Meaningful

Slow-Fast

Successful-Unsuccessful

Dehumanising-Humanising

Impersonal-Personal

Expressive-Inexpressive

Distant-Close

Hot-Cold

Emotional-Unemotional

Sensitive-Insensitive

295

2. Indicate your agreement with the following statements. The "system" refers to the meeting type environment you used today. Please do not leave out any of the statements. If you feel you cannot respond to a particular item, please circle the centre point of the scale. Scale = 1 (strongly disagree) – 5 (strongly agree).

I think I would like to use this system frequently.

I found the system unnecessarily complex.

I thought the system was easy to use.

I think that I would need the support of a technical person to be able to use this system

I found the various functions in this system were well integrated.

I thought there was too much inconsistency in this system.

I would imagine that most people would learn to use this system very quickly.

I found the system very cumbersome to use.

I felt very confident using the system.

I need to learn a lot of things before I could get going with this system.

3. Indicate the level to which you feel the following statements are true by circling the appropriate number

Statements	To a very little extent		To some extent			To a very great extent	
During the meeting I got a good idea of how the other group members were reacting	1	2	3	4	5	6	7

During the meeting it was difficult to get a real impression of personal contact with the other group members

We have worked out a routine for using the technology in our group

We have developed certain operating procedures for using the technology

We have created innovative new uses for the technology

I feel that I belong to this group

I am happy to be part of this group

I do NOT see myself as part of this group

I am enthusiastic about this group

I feel that I am a member of this group

I am NOT content to be a part of this group

A sense of community exists between members

Group members were committed to the goals and objectives of the group

Trust was NOT exhibited within the group

Members had a strong sense of belonging to the group

Members had a strong sense of belonging to the group

Group members recognized and respected individual differences and contributions

Group members were open and frank in expressing their ideas and feelings

Overall I was personally satisfied with this meeting

This group produced effective and valuable results during this meeting

Overall the quality of this meeting was NOT high

The technology used in this meeting was suitable for the purpose of this meeting

It was easy to build upon the previous meeting (If this is your first meeting go straight to question 4)

4. Choose TWO activities that best represent the groups' main activities during this meeting

Planning ☐

Allocating tasks to group members ☐

Generating ideas/brainstorming☐

Collecting material/data☐

Reporting on collected material/data☐

Discussing ideas and suggestions☐

Combining members' data and material into one piece of work☐

Revising/reviewing the work☐

Planning/putting together presentation☐

Practising presentation☐

5. Shade in the time blocks to indicate how much of your time you spent doing the following activities during the meeting

Activities	Time blocks				
EXAMPLE: Encourages/praises others ideas					
Generating new ideas, suggesting ways to approach the task					
Raising important facts and opinions based on personal knowledge and experience					
Writing down ideas and thoughts of the group					
Asking for information, knowledge & experience from other members					
Bringing together the different members' ideas					
Helping group assess the quality of suggestions/solutions					
Pulling things together and restating them offering a decision or conclusion for the group to consider					
Encouraging/praising others ideas					
Mediating any differences/problems between members					
Ensuring all members have a chance to share their ideas/feelings					
Helping the group set appropriate goals and evaluating group processes					
Agreeing with others and pursuing their ideas/suggestions					
Monitoring group processes and providing feedback on group functioning					

6. Shade in the time blocks to show how much of your time you spent on different discussions

Description of discussion	Time blocks				
Type 1: Worked together on the actual presentation e.g. combining data, exchanging ideas					
Type 2: Discussed work related topics e.g. how to use the technology, time of lectures, how to get a good mark					
Type 3: Non task based discussion e.g. about television, the night before, family, friends					
Type 4: Discussion about a minor /major upset that has occurred for a group member					

7. Tick (✔) the types of discussions you had with specific group members during the meeting

Name of group member	Type of discussion			
	Type 1	Type 2	Type3	Type 4

8. During the last few days, please (✔) which of the following interactions took place with the other members of your group (outside of specific meeting times)

	Yes	No
We discussed pros and cons of the meeting technologies		
We discussed better ways of using the meeting technologies		
We engaged in social exchanges		

9. During the last few days, please (✔) which of the following interactions took place with members of the IS course who are NOT in your group?

	Yes	No
We discussed the project		
We discussed better ways of using the meeting technologies		

References

Abercrombie, N. E. A. (1988). Penguin Dictionary of Sociology. Penguin Books, Middlesex.

Abnett, C., Stanton, D., Neale, H. & O'Malley, C. (2001). The Effect of Multiple Input Devices on Collaboration and Gender Issues. In Proceedings of the First European Conference on Computer Supported Collaborative Learning (CSCL). March 22-24 2001, Maastricht, The Netherlands pp 29-36.

Abowd, G., Atkeson, C. G., Brotherton, J., Enqvist, T., Gulley, P., & Le Mon, J. (1998). Investigating the Capture, Integration and Access Problem of Ubiquitous Computing in Educational settings. In Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI'98). April 18-23 1998, LA, California, USA, ACM pp 440-447.

Adams, D. A., Todd, P. A. & Nelson, R. R. (1993). A Comparative Evaluation of the Impact of Electronic and Voice Mail on Organisational Communication, Information and Management, 24 (1): 9-21.

Adler, A., Gujar, A., Harrison, B. O'Hara, K. & Sellen, A. (1998). A Diary Study of Work Related Reading: Design Implications for Digital Reading Devices. In Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI'98). April 18-23 1998, LA, California, USA, ACM pp 241-248.

Adrianson, L. & Hjelmquist, E. (1991). Group Processes in Face-to-Face and Computer Mediated Communication. Behaviour and Information Technology, 10: 281-296.

Alevizou, P. (1999). Exploring Relationship Building and Community in Computer Mediated Environments: Observations and Analyses of Practices. Internal report on behalf of NCR.

Algemeen Dagblad (2001). "Special Telecom" http://www.consuweb.nl/telefoon/naslag~ (last accessed 30/5/02).

Aoki, K. (1994). Virtual Communities in Japan: Their Cultures and Infrastructure. Paper Presented at the Pacific Telecommunications Council 1994 Conference.

Argyle, M. (1991). Cooperation in Working Groups. In Cooperation: The Basis of Sociability. Routledge, London, pp 115-131.

Bagherian, F. & Thorngate, W. (2000). Horses to Water: Student Use of Course Newsgroups www.firstmonday.dk/issues/issue5_8/thorngate/index.html (last accessed 8/4/03).

Barbrook, R. (1995). Media Freedom: The Contradiction of Communications in the Age of Modernity. Pluto, London. Available online http://www.hrc.wmin.ac.uk/hrc/theory/mediafreedom/t.4.1.html (last accessed 8/4/03).

Baym, N. (1995a). The Performance of Humor in Computer Mediated Communication. Journal of Computer Mediated Communication, 1(2). Available at www.ascusc.org/jcmc/vol1/issue2/baym.html (last accessed 8/4/03).

Baym, N. (1995b). The Emergence of Community in Computer Mediated Communication. In S. G. Jones (Ed.) *Cybersociety: Computer Mediated Communications and Community.* Sage, Newbury Park, California, pp 138-163.

Baym, N. (1998). The Emergence of Online Community. In S. G. Jones (Ed.) *Cybersociety 2.0 Revisiting Computer Mediated Communication and Community.* Sage, Thousand Oaks, CA, pp 35-68.

BBC ONLINE (2000a). Woodhead: Ban School Mobile Menace. March 5th 2000. http://news.bbc.co.uk/1/hi/education/666629.stm (last accessed 8/4/03).

BBC ONLINE (2002b). Email Ban for Council Staff. July 10th 2002. http://news.bbc.co.uk/1/hi/england/2119711.stm (last accessed 8/4/03).

BBC ONLINE (2002c). Africans Embrace Mobiles and the Net. October 2nd 2002. http://news.bbc.co.uk/1/hi/technology/2290486.stm (last accessed 8/4/03).

BBC ONLINE (2002d). Text Messaging for the Blind. November 5th 2002. http://news.bbc.co.uk/1/hi/technology/2403913.stm (last accessed 8/4/03).

BBC's Joy of Text Homepage (2002) http://www.bbc.co.uk/joyoftext/ (last accessed 8/4/03).

Benne, K. & Sheats, P. (1948). Functional Roles of Group Members. Journal of Social Issues 4: 41-49.

Benson, R. (2000). The Joy of Text. The Guardian. June 3rd 2000.

Berghel, H. (1997). Email: The Good, the Bad and the Ugly. Communications of the ACM (40) 4: 11-15.

Bevan, P. (2002). The Circadian Geography of Chat. Paper Presented at AoIR 3.0:Net/Work/Theory. Maastricht, The Netherlands. October 13-16th, 2002.

Blom, J., Monk, A., in press. A Theory of Personalisation of Appearance: Why Users Personalise their PCs and Mobile Phones. To appear in the Journal of Human-Computer Interaction.

Boettcher, S. (1997). Planning a Large, Short Term Community: Kasparov vs. Deep Blue Chess Match Community. Available: http://www.webcrossing.com/WebX?50@41.y9sOaYhAg9T.0@.f6ede58 (last accessed 8/4/03).

Borovoy, R. D. (2002). Folk Computing: Designing Technology to Support Face-to-Face Community Building. Unpublished PhD Thesis. MIT.

Borovoy, R., Martin, F., Vemuri, S., Resnick, M., Silverman, B. & Hancock, C. (1998). Meme Tags and Community Mirrors: Moving from Conferences to Collaboration. In Proceedings of ACM Conference On Computer Supported Cooperative Work (CSCW'98). November 14-18 1998, Seattle, USA, pp 159-168.

Borovoy, R., Silverman, B., Gorton, T., Klann, J, Notowidigdo, M., Knep, B., and Resnick, M (2001). Folk Computing: Revisiting Oral Tradition as a Scaffold for Co-Present Communities. In Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2001). March 31-April 5 2001, Seattle WA, USA, pp 466-473.

Bowes, S. (2000). Unions Signal Rise of the Cyberpicket. The Guardian, 10th February, 2000.

Brna, P. & Cooper, B. (2000). Lessons from the NIMIS Classroom: An Overview of Progress towards the "Classroom of Tomorrow" in an English County Primary School. http://cbl.leeds.ac.uk/~paul/projects/cblnimis/NIMISbriefing.html (last accessed 8/4/03).

Burke, K and Chidambaram, L. (1999). An Assessment of Change in Behavioral Dynamics Among Computer-supported Groups: Different Factors Change at Different Rates. Industrial Management and Data Systems, 99 (7): 288-295.

Burke, K., Aytes, K., Chidambaram, L. & Johnson, J. J (1999). A Study of Partially Distributed Work Groups. The Impact of Media, Location and Time on Perceptions and Performance. Small Group Research, 30 (4): 452-490.

Calhoun, C. (1992). The Infrastructure of Modernity: Indirect Social Relationships, Information Technology and Social Integration. In H. Haferkamp & N. Selser (Eds.). *Social Change and Modernity*. University of California Press, Berkeley, pp 205-236.

Cantor, L. & Siegel, M. (1994). How to Make a Fortune on the Information Superhighway. Harper Collins, New York.

Carroll, J., Howard, S., Vetere, F., Peck, J. and Murphy, J. (2001). Identity, Power and Fragmentation in Cyberspace: Technology Appropriation by Young People. In Proceedings of the 12th Australasian Conference on Information Systems (ACIS 2001), pp 95-102.

Carroll, J. & Rosson, M. B. (1996). Developing the Blacksburg Electronic Village. Communications of the ACM, 39 (12): 69-74.

Carroll, J. M. (1995). Scenario-Based Design: Envisioning Work and Technology in System Development. John Wiley & Sons, New York.

Cass, K., Heintz, T. J. & Kaiser, K. M. (1991). Using a Voice-Synchronous GDSS in Dispersed Locations: A Preliminary Analysis of Participant Satisfaction. In Proceedings of the 23rd Annual Hawaii International Conference on System Sciences, IEEE Society Press, Los Alamitos, CA, 3, pp 554-563.

Chavis, D. M., H. Hogge, J. H. McMillan, D. W. & Wandersman, A. (1986). Sense of Community through Brunswik's Lens: A First Look. Journal of Community Psychology 14: 24-40.

Chidambaram, L. (1996). Relational Development in Computer Supported Groups. MIS Quarterly, 20: 143-165.

Chidambaram, L & Jones, B. (1993) Impact of Communication Medium and Computer Support on Group Perceptions and Performance: A Comparison of Face-to-Face and Dispersed Meetings. MIS Quarterly, 17 (4): 465-491.

Chin, W.W., Salis, W.D., Pearson, A.W.& Stollak, M. J. (1999). Perceived Cohesion in Small Groups. Adapting and Testing the Perceived Cohesion Scale in a Small Group Setting. Small Group Research, 30 (6): 751-766.

Clarke, H. H., & Brennan, S. E. (1991). Grounding in Communication. In L. Resnick, J. M. Levine, & S. D. Teasley (Eds.), Perspectives on Socially Shared Cognition. APA, Washington, DC, pp 127-149.

Cole, K. A. (1995). Equity Issues in Computer Based Collaboration: Looking Beyond Surface Indicators. In Proceedings of Computer Supported Collaborative Learning (CSCL'95). October 17-20 1995, Bloomington, Indiana, pp 64-74.

Constant, D., Sproull, L. & Kiesler, S. (1996). The Kindness of Strangers: The Usefulness of Electronic Weak Ties for Technical Advice. Organisation Science, 7 (2): 119-35.

Corti, L. (1993). Using Diaries in Social Research. Social Research Update. Issue Two, Department of Sociology, University of Surrey. http://www.soc.surrey.ac.uk/sru/SRU2.html (last accessed 8/4/03).

Cothrel, J. (2000). Measuring the Success of an Online Community. Strategy and Leadership 28 (2): 17-21.

Crook, C. & Webster, D. S. (1997). Designing for Informal Undergraduate Computer Mediated Communication. Active Learning, 7: 47-51.

Cullen, D. (2002). Logica Opens SMS to Landlines. The Register. June 17th 2002. http://www.theregister.co.uk/content/59/25754.html (last accessed 8/4/03).

Curtis, P (1992). Mudding: Social Phenomena in Text-Based Virtual Realities. Proceedings of 1992 Conference on the Directions and Implications of Advanced Computing (DIAC'92). May 2-3 1992. Berkeley, USA. http://www.scara.com/~ole/literatur/mudding.html (last accessed 8/4/03).

Daft, R. L. & Lengel, R. H. (1986). Organisational Information Requirements, Media Richness and Structural Design. Management Science 32 (5): 554-571.

Davis, D. (2001). CB Radio http://www.cybertron.com/~ddavis/cb10.htm (last accessed 8/4/03).

DeSanctis, G. & Poole, M. S. (1994). Capturing the Complexity in Advanced Technology Use: Adaptive Structuration Theory. Organisation Science 5 (2): 121-147.

Dix, A., Finlay, J., Abowd, G. & Beale, R. (1993). Human Computer Interaction 1st Edition. Prentice Hall Europe. Hemel Hempstead UK.

Döring, N. (2002a). "Kurzm. wird gesendet" - Abkürzungen und Akronyme in der SMS-Kommunikation. [Abbreviations and Acronyms in Text Messaging]. Muttersprache. Vierteljahresschrift für Deutsche Sprache. Heft 2/2002. ISSN 0027-514X. http://www.nicola-doering.de/publications/sms-kurzformen-doering-2002.pdf (last accessed 8/4/03).

Döring, N. (2002b). "1x Brot, Wurst, 5Sack Äpfel I.L.D." - Kommunikative
Funktionen von Kurzmitteilungen (SMS). ["1xbread, sausage, 5bags of apples,
I.L.Y." - Communicative Functions of Text Messages (SMS)] Zeitschrift für
Medienpsychologie 3/2002. ISSN 1617-6383. http://www.nicola-
doering.de/publications/sms-funktionen-doering-2002.pdf (last accessed
8/4/03).

Eisenstein, E. L. (1979). The Printing Press as an Agent of Change: Communications
and Cultural Transformations in Early Modern Europe. Cambridge University
Press, New York.

Eldridge, M. & Grinter, R. (2001). Studying Text Messaging in Teenagers. Paper
presented at Mobile Communications: Understanding Users, Adoption &
Design Workshop in Proceedings of the ACM Conference on Human Factors
in Computing Systems (CHI 2001). April 1 & 2 2001, Seattle WA, USA.

Ellis, C.A., Gibbs, S. J and Rein, G.L (1991). Groupware: Some Issues and
Experiences. Communications of the ACM 34 (1): 38-58.

Ellsworth, J. & Ellsworth, M. (1994). The Internet Business Book. Wiley, New York.

Elrod, S., Bruce, R., Gold, R., Goldberg, D., Halasz, F., Janssen, W., Lee, D., McCall,
K., Pedersen, E., Pier, K., Tang, J. & Welch, B. (1992). Liveboard: A Large
Interactive Display Supporting Group Meetings, Presentations and Remote
Collaboration. In Proceedings of the ACM Conference on Human Factors in
Computing Systems (CHI'92). May 3-7, 1992. Monterey California, pp 599-
607.

Etzioni, A. & Etzioni, O. (1999). Face-to-Face and Computer-Mediated Communities:
A Comparative Analysis. The Information Society, 15 (4): 241-248.

Fernback, J. (1997). The Individual within the Collective: Virtual Ideology and the
Realisation of Collective Principles. In S. G. Jones (Ed.) *Virtual Culture:
Identity and Communication in Cybersociety.* Sage, Thousand Oaks, CA, pp
36-54.

Fernback, J. (1999). There is a There There. Notes Towards a Definition of
Cybercommunity. In S. Jones (Ed.) *Doing Internet Research: Critical Issues
and Methods for Examining the Net.* Sage, Thousand Oaks, CA, pp 203-220.

Fernback, J. & Thompson, B. (1995). Virtual Communities: Abort, Retry, Failure?
http://www.well.com/user/hlr/texts/VCcivil.html (last accessed 8/4/03).

Figallo, C. (1998). Hosting Web Communities: Building Relationships, Increasing Customer Loyalty and Maintaining a Competitive Edge. John Wiley & Sons. New York.

Finholt, T. & Sproull, L. (1990). Electronic Groups at Work. Organisation Science, 1: 41-64.

Forrester Research (2002). Only 20 Percent of European Mobile Users will Adopt Next Generation – 2.5G and 3G – Mobile Applications in the Next Two Years. http://www.forrester.com/ER/Press/Release/0,1769,762,FF.html (last accessed 8/4/03).

Frings, S. (2002) SMS Tools http://www.isis.de/members/~s.frings/smstools_index.html (last accessed 8/4/03).

Galston, W. A. (1996). (How) Does the Internet Affect Community? Some Speculations in Search of Evidence. http://siyaset.bilkent.edu.tr/Harvard/galston.htm (last accessed 8/4/03).

Garner, I., Francis, J., Wales, K. (2002). An Evaluation of the Implementation of a Short Messaging System (SMS) to Support Undergraduate Student Learning. In S. Anastopoulou, M. Sharples & G, Vavoula (Eds.). In Proceedings of the European Workshop on Mobile and Contextual Learning. June 20-21 2002, Birmingham University, pp 15-18.

Garton, L. Haythornthwaite, C. & Wellman, B. (1997). Studying Online Social Networks. Journal of Computer Mediated Communication 3 (1). http://www.ascusc.org/jcmc/vol3/issue1/garton.html (last accessed 8/4/03).

Garton, L. & Wellman, B. (1995). Social Impacts of Electronic Mail in Organisations: A Review of the Research Literature, in B.R. Burleson (Ed.), *Communication Yearbook/18*. Sage, Thousand Oaks, CA pp. 434-453.

Goffman, E. (1959). The Presentation of Self in Everyday Life. Doubleday Anchor, New York.

Granovetter, M. (1973). The Strength of Weak Ties. American Journal of Sociology, 78: 1360-80.

Greenberg, S. and Rounding, M. (2001) The Notification Collage: Posting Information to Public and Personal Displays. In Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2001). March 31-April 5 2001, Seattle WA, USA, pp 515-521.

Grinter, R. E. & Palen, L. (2002). Instant Messaging in Teen Life. In Proceedings of the ACM Conference on Computer Supported Cooperative Work (CSCW 2002). November 16-20, 2002. New Orleans, USA, pp 21-30.

Gunawardena, C. N. Zittle, F. J. (1997). Social Presence as a Predictor of Satisfaction Within a Computer Mediated Conferencing Environment. American Journal of Distance Education, 11 (3): 8-26.

Guterbock, T. M. & Fries J. C. (1997). Maintaining America's Social Fabric. The American Association of Retired Persons (AARP) Survey of Civic Involvement. The University of Virginia Center for Survey Research. Available at http://research.aarp.org/general/civic_inv_toc.html (last accessed 8/4/03).

GVU Graphic Visualisation and Usability Center's 9th WWW User Survey (1998) http://www.gvu.gatech.edu/user_surveys/survey-1998-04/ (last accessed 8/4/03).

Hagel, J. & Armstrong, A. (1997). Net Gain: Expanding Markets through Virtual Communities. Harvard Business School Press, Boston.

Haines, V. A., Hurlbert, J. S. & Beggs, J. J. (1996). Exploring the Determinants of Support Provision: Provider Characteristics, Personal Networks, Community Contexts and Support Following Life Events. Journal of Health and Social Behavior 37 (3): 252-264.

Hamman, R. (1998). The Online/Offline Dichotomy: Debunking some Myths about AOL Users and the Effects of their Being Online upon Offline Friendships and Offline community. MPhil thesis. University of Liverpool. Department of Communication Studies. http://www.cybersoc.com/mphil.html (last accessed 8/4/03).

Hamman, R.B. (1999). Computer Networks Linking Network Communities: A Study of the Effects of Computer Network Use Upon Pre-existing Communities. http://www.cybersoc.com (last accessed 8/4/03).

Hammann, E. & Hennessey, J. M. (2002). How to Attract Early Teens to your Mobile Network. In M. M. Bekker, P. Markopoulos & M. Kersten-Tsikalkina (Eds.). 'Interaction Design and Children' Proceedings of the International Workshop on Interaction Design and Children. August 28-29 2002. Eindhoven University of Technology, The Netherlands. Shaker Publishing, Eindhoven, The Netherlands, pp 110-124.

Hampton, K. N. (2002a). Place-Based and IT Mediated "Community". Planning Theory and Practice, 3 (2): 228-231.

Hampton, K. (2002b). Being Wired Helps you Connect. BBC ONLINE 29th May 2002. http://news.bbc.co.uk/hi/english/sci/tech/newsid_2010000/2010672.stm (last accessed 8/4/03).

Hardy, I. (2001). Messaging in an Instant. BBC ONLINE 9th September 2001. http://news.bbc.co.uk/1/hi/sci/tech/1531112.stm (last accessed 8/4/03).

Harré, R. (1989). Language Games and the Texts of Identity. In J. Shotter and K. Gergen (Eds.) *Texts of Identity.* Sage, London, pp 20-35.

Harrington, C.L and Bielby, D.D. (1995). Where Did you Hear That? Technology and the Social Organisation of Gossip. The Sociological Quarterly, 36 (3): 607-628.

Hattori, F., Ohguro, T., Yokoo, M., Matsubara, S. & Yoshida, S. (1999). Social Ware: Multiagent Systems for Supporting Network Communities. Communications of the ACM 42 (3): 55-61.

Haythornthwaite, C. (1998). A Social Network Study of the Growth of Community Among Distance Learners. IRIS, Bristol UK.

Haythornthwaite, C. (2001). Tie Strength and the Impact of New Media. Proceedings of the Hawaii International Conference on System Sciences, January, Maui, Hawaii.

Haythornthwaite, C. & Wellman, B. (1998). Work, Friendship and Media Use for Information Exchange in a Networked Organisation. Journal of the American Society for Information Science, 49 (12): 1101-1114.

Haythornthwaite, C., Kazmer, M.M., Robins, J. & Shoemaker, S. (2000). Community Development Among Distance Learners: Temporal and Technological Dimensions. Journal of Computer Mediated Communication, 6 (1). http://www.ascusc.org/jcmc/vol6/issue1/haythornthwaite.html (last accessed 8/4/03).

Hermida, A. (2002). Web Gives Voice to Iranian Women. BBC Online. 17th June 2002. http://news.bbc.co.uk/hi/english/sci/tech/newsid_2044000/2044802.stm (last accessed 8/4/03).

Hillery, G. A., Jr. (1955). Definitions of Community: Areas of Agreement. Rural Sociology, 20: 111-123.

Hogg, M. A. & McGarty, C. (1990). Self-categorization and Social Identity. In D. Abrams and M. A. Hogg (Eds.), *Social Identity Theory: Constructive and Critical Advances*. Harvester-Wheatsheaf, Hemel-Hempstead, UK, pp 10-27.

Howse, E., Hamilton, D & Symons, L. (2000). The Effect of a SMART board on Concept Learning, Generation of Ideas, Group Processes and User Interaction Satisfaction. SMARTer kids foundation. http://www.smarterkids.org/research/paper5.asp (last accessed 8/4/03).

Instone, K. (1997). Site Usability Evaluation. Webreview. October 10th 1997. http://www.webreview.com/1997/10_10/strategists/10_10_97_1.shtml (last accessed 30/5/02).

Ishii, H. (1999). The Superficial Social Life of Japan's Mobile Phone Addicts. Ronza, June 1999. http://www.fpcj.jp/e/shiryo/vfj/99/4_6.html (last accessed 8/4/03).

Ito, M., Adler, A., Linde, C., Mynatt, E. & O'Day, V. (1999). Final Report: Broadening Access: Research for Diverse Network Communities. http://www.seniornet.org/php/default.php?PageID=5473&Version=0&Font=0 (last accessed 8/4/03).

James, C. (2001). Designing the Next Generation of Mobile Communication. Paper presented at Mobile Communications: Understanding Users, Adoption & Design Workshop in Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2001). April 1 & 2 2001, Seattle WA, USA.

Johnson, M.M. & Huff, M.T. (2000). Student's Use of Computer Mediated Communication in a Distance Education Course. Research on Social Work Practice, 10 (4): 519-532.

Jones, S. G. (1995). Understanding Community in the Information Age. In S. G. Jones (ed.) *Cybersociety, Computer-Mediated Communication and Community*. Sage, Thousand Oaks, CA, pp 1-35.

Jones, S. G. (1997). The Internet and its Social Landscape. In S. G. Jones (Ed.) *Virtual Culture: Identity and Communication in Cyberspace*. Sage, Thousand Oaks CA, pp 7-36.

Jones, Q. (1997). Virtual-Communities, Virtual Settlements & Cyber-Archaeology: A Theoretical Outline. Journal of Computer Mediated Communication 13 (3). http://www.ascusc.org/jcmc/vol3/issue3/jones.html (last accessed 8/4/03).

Kanfer, A. (1999). It's a Thin World: The Association Between Email Use and Patterns of Communication and Relationship. http://archive.ncsa.uiuc.edu/edu/trg/info_society.html (last accessed 8/4/03).

Katz, J. E. & Aspden, P. (1997). A Nation of Strangers? Communications of ACM, 40 (12): 81-86.

Kaye, A. (1995). Computer Supported Collaborative Learning. In N. Heap, R. Thomas, G. Einon, R. Mason & H. MacKay (Eds.), *Information Technology and Society*. Sage, London pp 192-210.

Kiesler, S. & Sproull, L. (1992). Group Decision Making and Communication Technology. Organisation Behaviour and Human Decision Processes, 52: 96-123.

Kim, A. J. (2000). Community Building on the Web: Secret Strategies for Successful Online Communities. Peachpit Press.

Kim, J. (2001). Analysing Mobile Internet Users: results from a Monitoring Study, an Experiment and a Survey Study. Paper presented at Mobile Communications: Understanding Users, Adoption & Design Workshop in Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2001). April 1 & 2 2001, Seattle WA, USA.

Kollock, P. (1998). Design Principles for Online Communities. PC Update, 15 (5): 58-60.

Kollock, P. (1999). The Production of Trust in Online Markets. In E. J. Lawler, M. Macy, S. Thyne & H. A. Walker. (Eds.). *Advances in Group Processes*, 16: 99-124. JAI Press, Greenwich, CT.

Kopomaa, T. (2000). The City in Your Pocket: Birth of the Mobile Information Society. Gaudeamus. Helsinki.

Kraut, R. (1990). In R. Ensor (Moderator). How Can We Make Groupware Practical? In Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI'90). April 1-5 1990. Seattle, WA. USA.

Kraut, R., Galegher, J., Fish, R. & Chalfonte, B. (1992). Task Requirements and Media Choice in Collaborative Writing. Human Computer Interaction, 7 (4): 375-407.

Kraut, R., Lundmark, V., Patterson, M., Kiesler, S., Mukopadhyay, T. & Scherlis, W. (1998). Internet Paradox: A Social Technology that Reduces Social

Involvement and Psychological Well Being? American Psychologist, 53 (9): 1017–1031.

Lacohee, H. & Anderson, B. (2001). Interacting with the Telephone, International Journal Human-Computer Studies, 54: 665-699.

Laurier, E. (1999). Why People Say Where They Are During Mobile Phone Calls. http://www.geog.gla.ac.uk/~elaurier/dynamic/S&Swhere2-Title.html (last accessed 8/4/03).

Lazar, J. & Preece, J. (1998). Classification Schema for Online Communities. Paper Presented at the Association for Information Systems Americas Conference 1998, Baltimore, MD.

Lazar, J., Tsao, R. & Preece, J. (1999). One Foot in Cyberspace and the Other on the Ground: A Case Study of Analysis and Design Issues in a Hybrid Virtual and Physical Community. WebNet Journal: Internet Technologies, Applications and Issues, 1 (3): 49-57.

Lea, M., O'Shea, T. & Fung, P. (1999). Constructing the Networked Organisation. In G. DeSanctis & J Fulk (Eds.). *Shaping Organisation Form: Communication, Connection and Community*. Sage, Newbury Park, CA, pp 295-324.

Lehnert, W. G. (1998). Internet 101: A Beginners Guide to the Internet & the World Wide Web. Addison-Wesley, Harlow, UK.

Licoppe, C. & Heurtin, J.P. (2001). Managing One's Availability to Telephone Communication Through Mobile Phones: A French Case Study of the Development Dynamics of Mobile Phone Use. Personal and Ubiquitous Computing, 5 (2): 99-108.

Light, P., Colbourn, C. & Light, V. (1997). Computer Mediated Tutorial Support for Conventional University Courses. Journal of Computer Assisted Learning, 13 (4): 228-235.

Light, P. & Light. V. (1999). Analysing Asynchronous Learning Interactions. Computer Mediated Communication in a Conventional Setting, in K. Littleton & P. Light (Eds.). *Learning with Computers: Analysing Productive Interaction*. Routledge, London, pp. 162-178.

Ling, R. (2000). We Will be Reached: The Use of Mobile Telephony Among Norwegian Youth. Information Technology and People, 13 (2): 102-120.

Ling, R. (2001). We Release them Little by Little: Maturation and Gender Identity as Seen in the Use of Mobile Telephone. Personal and Ubiquitous Computing, 5 (2): 123-136.

Ling, R. & Yttri, B. (1999). Nobody Sits at Home and Waits for the Telephone to Ring: Micro and Hyper-coordination Through the Use of the Mobile Telephone. Telenor report 30/1999.

Mackay, W. (1988). Diversity in the Use of Electronic Mail: A Preliminary Inquiry ACM Transactions on Office Information Systems, 6 (4): 380-397.

Malhotra, A., Gosain, S. & Hars, A. (1997). Evolution of a Virtual Community: Understanding Design Issues through a Longitudinal Study. In Proceedings of the 18th International Conference on Information Systems. Dec 14-17. Atlanta USA, pp 59-74.

Mander, G. (2001). WAN2TLK?: ltle bk of txt msgs. St. Martin's Press, Place.

Mantei, M. (1988). Capturing the Capture Concepts: A Case Study in the Design of Computer Supported Meeting Environments. In Proceedings of the ACM Conference on Computer Supported Cooperative Work (CSCW'98). September 26-28 Portland Oregon, USA, pp 257-270.

Mark, G., Grudin, J. & Poltrock, S. E. (1999). Meeting at the Desktop: An Empirical Study of Virtually Co-located Teams. In Proceedings of the 6th European Conference on Computer Supported (ECSCW'99). September 12-16 1999. Copenhagen Denmark, pp 159-178.

Marks, P. (2002). And finally…txt on yr TV. New Scientist. June 22nd 2002 p21.

Matthews, J. (2000). Women on the Web. BBC News Online February 2nd 2000. http://news.bbc.co.uk/hi/english/uk/newsid_626000/626947.stm (last accessed 8/4/03).

McElvoy, A. (2000). Extracts from the Speech: The Prime Minister's Lexicon Analysed. The Independent, June 8th 2000.

Meek, J. (2002). Mobile World. The Guardian. November 11th 2002 p5.

Mele, C. (1999). Cyberspace and Disadvantaged Communities: The Internet as a Tool for Collective Action. In M. A. Smith & P. Kollock (Eds.), *Communities in Cyberspace*. Routledge, London, pp 290-310.

Meyrowitz, J. (1985). No Sense of Place: The Impact of Electronic Media on Social Behavior. Oxford University Press, New York.

Miller, H. (1995). The Presentation of Self in Electronic Life: Goffman on the Internet. Paper Presented at Embodied Knowledge and Virtual Space Conference. Goldsmith's College, University of London, June 1995.

Misanchuk, M. & Anderson, T. (2001). Strategies for Building Community in an Online Learning Environment: Communication, Cooperation and Collaboration. In Proceedings of the 6th Annual Mid-South Instructional Technology Conference. April 8-10 2001. www.mtsu.edu/~itconf/proceed01/19.html (last accessed 8/4/03).

Mobile Data Association (2002). http://www.mda-mobiledata.org/ (last accessed 8/4/03).

Moran, T. P., Chiu, P., Harrison, S., Kurtenbach, G., Minneman, S & van Melle, W. (1996). Evolutionary Engagement in an Ongoing Collaborative Work Processes: A Case Study. In Proceedings of the ACM Computer Supported Cooperative Work (CSCW'96). November 16-20, 1996. Boston, MA, USA, pp 150-159.

Morris, D., Mitchell, N., & Bell, M. (1999). Student use of Computer Mediated Communication in an Open University Level 1 course: Academic or Social? Journal of Interactive Media in Education, 99 (2) http://www-jime.open.ac.uk/99/2/morris-99-2-paper.html (last accessed 8/4/03).

Morse, J. M. (1994). Designing Funded Qualitative Research. In N. K. Denzin & Y. S. Lincoln (Eds.). Handbook of Qualitative Research. Sage, Thousand Oaks, CA, pp 220-235.

Mynatt, E. D., Adler, A., Ito, M., V. L. O'Day. (1997). Design for Network Communities. In Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI'97). March 22-27 1997. Atlanta, Georgia, USA, pp 210-217.

Nardi, B. A., Whittaker, S. & Bradner, E. (2000). Interaction and Outeraction: Instant Messaging in Action. In Proceedings of the ACM Computer Supported Cooperative Work (CSCW'2000). December 2-6, 2000. Philadelphia, USA, pp 79-88.

National Statistics Office (2002) http://www.statistics.gov.uk/pdfdir/int0901.pdf (last accessed 8/4/03).

Nielsen, J. (1994b). Heuristic Evaluation. In Nielsen, J., and Mack, R.L. (Eds.). Usability Inspection Methods. John Wiley & Sons, New York, pp 25-62.

314

Nielsen, J. & Mack, R. L. (1994). Usability Inspection Methods. John Wiley & Sons, New York.

Nishibe, Y., Waki, H., Morihara, I., Hattori, F., Ishida, T., Nishimura, T., Yamaki, H., Komura, T., Itoh, N., Gotoh, T., Nishida, T., Takeda, H., Sawada, A.. Maeda, H., Kajihara, M. & Adachi, H. (1998). Mobile Digital Assistants for Community Support. AI Magazine, 19 (2): 31-49.

Nonnecke, B. (2000a). Lurker Demographics: Counting the Silent. In Proceedings of the ACM Conference on Human Factors in Computing Systems. April 1-6 2000. The Hague, The Netherlands, pp73-80.

Ocker, R. J. (2001). The Relationship between Interaction, Group Development, and Outcome: A Study of Virtual Communication. In Proceedings of the 34th Hawaii International Conference on System Sciences. IEEE, pp 216-225.

Oftel (2002). Consumer's use of mobile telephony Q9 May 2002. http://www.oftel.gov.uk/publications/research/2002/q9int_r0702.htm (last accessed 8/4/03).

O'Hara, K., Perry, M., Sellen, A. & Brown, B. (2002). Managing Information on the Move: A Study of the Information Needs of Mobile Professionals. In B. Brown, N. Green and R. Harper (Eds.), *Wireless World: Social and Interactional Aspects of the Mobile Age*. Springer Verlag, Berlin, pp 180-194.

Oldenburg, R. (1991). The Great Good Place: Cafes, Coffee Shops, Community Centers, Beauty Parlors, General Stores, Bars, Hangouts, and How They Get You through the Day. Paragon House, New York.

Olson, G.M. & Olson, J. (2000). Distance Matters. Human Computer Interaction 15: 139-178.

Olson, G. M. & Olson, J. S. (1991). User Centred Design of Collaboration Technology. Journal of Organisational Computing, 1: 61-83.

Palen, L. & Salzman, M. (2002). Voicemail Diary Studies for Naturalistic Data Capture Under Mobile Conditions. In Proceedings of the ACM Conference on Computer Supported Cooperative Work (CSCW 2002). November 16-20, 2002. New Orleans, USA, pp 87-95.

Palloff, R. M. & Pratt, K. (1999). Building Learning Communities in Cyberspace: Effective Strategies for the Online Classroom. Jossey-Bass Publishers. San Francisco.

Parks, M.R & Floyd, K. (1996). Making Friends in Cyberspace. Journal of Communication, 46 (1): 80-97.

Patterson, H. (1996). Computer-Mediated Groups: A Study of a Culture in Usenet. Unpublished PhD thesis, Department of Computer Science, Texas A & M University. http://www.agm.net/holly/holly_dissert.html#ct (last accessed 8/4/03).

Pereira, C. (1993). Anthology: The Breadth of Community. In J Bornat, C. Pereira, D. Pilgram & F. Williams (Eds.), *Community Care a Reader*. MacMillan Press London, pp 5-32.

Petrie, H. (1999). Writing in Cyberspace: A Study of the Uses, Style and Content of Email. Obtained direct from author at h.l.petrie@city.ac.uk

Phillips, T. (2000). Grey Pride on the Net. The Guardian. February 24th, 2000.

Pierce, J. R. (1976). The Telephone and Society in the Past Hundred Years. In I. De Sola Pool (Ed.), *The Social Impact of the Telephone*. MIT Press, Cambridge MA, pp 159-195.

Poplin, D. E. (1979). Communities: A Survey of Theories and Methods of Research. 2nd Edition, MacMillan Publishing Co, New York.

Powazek, D. M. (2001). Design for Community: The Art of Connecting Real People in Virtual Places. New Riders Publishing.

Preece, J. (2000). Designing Online Communities: Designing Usability Supporting Sociability. John Wiley & Sons, Chichester UK.

Preece, J. & Ghozati, K. (1998b). Offering Support and Sharing Information: A Study of Empathy in a Bulletin Board Community. Paper Presented at the Computer Virtual Environments Conference, Manchester UK.

Preece, J., Rogers, Y., Sharp, H., Benyon, D., Holland, S. & Carey, T. (1994). Human- Computer Interaction. Addison-Wesley, Wokingham, UK.

Putnam, R. D. (1995). Bowling Alone: America's Declining Social Capital. Journal of Democracy, 6 (1): 65-78. http://muse.jhu.edu/demo/journal_of_democracy/v006/putnam.html (last accessed 8/4/03).

Rafaeli, S. (1988). Interactivity from New Media to Communication. Sage Annual Review of Communication Research: Advancing Communication Science, 16: 110-134.

Rafaeli, S. Sudweeks, F. (1997). Networked Interactivity. Journal of Computer Mediated Communication, 2 (4). http://www.ascusc.org/jcmc/vol2/issue4/rafaeli.sudweeks.html (last accessed 8/4/03).

Rappaport, J. (1987). Terms of Empowerment/Exemplars of Prevention: Toward a Theory for Community Psychology. American Journal of Community Psychology, 15 (2): 121-148.

Reid, E. (1991). Electropolis: Communication and Community on Internet Relay Chat. University of Melbourne. Department of History. http://www.aluluei.com/ (last accessed 8/4/03).

Rekimoto, J. (1998). A Multiple Device Approach for Supporting Whiteboard-Based Interactions. In Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI'98). April 18-23 1998, LA, California, USA, ACM pp 344-351.

Rheingold, H. (1993). The Virtual Community. Addison-Wesley, Reading MA.

Rheingold, H. (1999). Technology, Community, Humanity and the Net. Speakout.com. April 29th 1999. http://speakout.com/activism/opinions/3807-1.html (last accessed 30/5/02).

Rheingold, H. (2002). Cyborg Swarms and Wearable Communities. The Feature. June 3rd 2002. http://www.thefeature.com/index.jsp?url=view.jsp?pageid=15095 (last accessed 8/4/03).

Rieman, J. (1993). The Diary Study: A Workplace Oriented Research Tool to Guide Laboratory Efforts Collecting User Information for System Design. In Proceedings of the ACM INTERCHI'93 Conference on Human Factors in Computing Systems. April 24-29, 1993. Amsterdam, The Netherlands, pp 321-326.

Rogers, E. M. (1986). Communication Technology: The New Media in Society. The Free Press, MacMillan, New York.

Roschelle, J. (1992). What Should Collaborative Technology Be? A Perspective from Dewey and Situated Learning. SIGCUE Outlook, 21 (3): 39-42.

Rosenburg, S. (1998). Sad and Lonely in Cyberspace: Why the New Net Depression Study is Something to get Bummed About. Salon Magazine, October 26th 1998. http://www.salonmagazine.com/21st/rose/1998/09/03straight.html (last accessed 8/4/03).

Salisbury, W. D., Reeves, W. J., Chin, W. W., Bell, M., and Gopal, A. (1997). Robbing Peter to Pay Paul: The Other Side of Group Support Systems. In Proceedings of the AIS Americas Conference, Indianapolis, IN, pp 575-577.

Sawhney, N., Wheeler, S. & Schmandt, C. (2001). Aware Community Portals: Shared Information Appliances for Transitional Spaces. Personal and Ubiquitous Computing, 5 (1): 66-70.

Schenker, J. L. (2000a). A Hitch in Time. Time Europe Business Magazine. August 7th 2000, 156 (6).

Schenker, J. L. (2000b). Where Sci-fi Meets the Net. Time Select. September 25th 2000, 156 (13).

Schiano, D. J. & White, S. (1998). The First Noble truth of Cyberspace: People are People (even when they MOO). In Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI'98). April 18-23 1998, LA, California, USA, ACM pp 352-359.

Schuler, D. (1996). New Community Networks: Wired for Change. Addison-Wesley. ACM Press, New York USA.

Schwier, R. A. (2002). Virtual Learning Communities. In G. Anglin (Ed.), *Critical Issues in Instructional Technology*. Libraries Unlimited, Englewood, Colorado.

Selznick, P. (1996). In Search of Community. In W. Vitek & W. Jackson (Eds.), *Rooted in the Land: Essays on Community and Place*. Yale University Press, New Haven, pp 195-206.

Sharples, M. (2000). Disruptive Devices: Personal Technologies and Education. Educational Technology Research Paper Series. University Of Birmingham.

Short, J., Williams, E. & Christie, B. (1976). The Social Psychology of Telecommunications. John Wiley and Sons. Chichester.

Shortis, T. (2000). The Language of ICT. Routledge, London.

Siegel, J., Dubrovsky, V., Kiesler, S & McGuire, T. (1986). Group Processes in Computer Mediated Communication. Organisational Behavior & Human Decision Processes, 37: 157-187.

Smith, M.A. (1992). Voices from the Well: The Logic of the Virtual Commons. Master's Thesis, Department of Sociology, UCLA. http://research.microsoft.com/research/pubs/view.aspx?pubid=799 (last accessed 8/4/03).

Sproull, L. & Kiesler, S. (1990). Connections: New Ways of Working in the
Networked Organisation. MIT Press, Cambridge, MA.

Standage, T. (1998). The Victorian Internet. Phoenix, London.

Stefik, M., Foster, G., Bobrow, D. G., Kahn, K., Lanning, S., & Suchman, L. (1987).
Beyond the Chalkboard: Computer Support for Collaboration and Problem
Solving in Meetings. Communications of the ACM, 30 (1): 32-47.

Stewart, T. (1996). The Invisible Key to Success. Fortune. August 5th, 1996.

Suler, J. (2000). Bringing Online and Offline Living Together: The Integration
Principle. In The Psychology of Cyberspace (orig. pub. 1996),
http://p24601.rider.edu/suler/psycyber/integrate.html (last accessed 8/4/03).

Taylor, A. S. & Harper, R. (2001) Talking 'Activity': Young People and Mobile
Phones. Paper presented at Mobile Communications: Understanding Users,
Adoption & Design Workshop in Proceedings of the ACM Conference on
Human Factors in Computing Systems (CHI 2001). April 1 & 2 2001, Seattle
WA, USA.

Tönnies F. (1971). The Concept of Gemeinschaft. In W. J. Cahnman & R Heberle
(Eds.), *Ferdinand Tonnies on Sociology: Pure, Applied and Empirical.
Selected Writings.* University of Chicago Press, Chicago, pp 62-72.

Trabak, A. (2000). On-line Relationships and Communities: Moderated Email Groups
with Community Users. What + if 2. Internal Publication for NCR.

Turner, J. C. (1987). Rediscovering the Social Group: A Self-Categorisation Theory.
Basil Blackwell, Oxford.

UK Online. (2000). Annual Report.
http://www.e-envoy.gov.uk/ (last accessed 8/4/03).

Uzark, K., Benedict, M. B., Carson, E., Daberkow, G., Fosse, L., Hayman, S.,
Higgens, S. & McGarth, K. (1997). Guidelines for Parent Support Groups,
America Heart Association Science Advisory.
http://www.americanheart.org/presenter.jhtml?identifier=1746 (last accessed
8/4/03).

Vickers, A. (2000). Shopping by Numbers. The Guardian (Media). November 20th,
2000.

Wakeford, N. & Kotamraju, N. (2002). 'It's Just Easier to Text. Really': Young People
and New Communication in the UK and the US. Paper presented at AoIR 3.0.
Maastricht, The Netherlands, 13-16th October, 2002.

Walther, J. B. (1995). Relational Aspects of CMC: Experimental Observations Over Time. Organisation Science, 6 (2): 186-203.

Ward, K. J. (1999). Cyber-ethnography and the Emergence of Virtually New Community. Journal of Information Technology, 14: 95-105.

Watson, N. (1997). Why We Argue About Virtual Community: A Case Study of the Phish.Net Community. In S. G. Jones (Ed.), *Virtual Culture: Identity and Communication in Cyberspace*. Sage, Thousand Oaks CA, pp 102-133.

Weinreich, F. (1997). Establishing a Point of View Towards Virtual Communities. Computer-Mediated Communication, 3, (2). Available:http://www.december.com/cmc/mag/1997/feb/wein.html (last accessed 8/4/03).

Wellman, B. (1996). Are Personal Communities Local? A Dumptarian Reconsideration. Social Networks, 18: 347-354.

Wellman, B. (1997). An Electronic Group is Virtually a Social Network. In S. Kiesler (Ed.), *Culture of the Internet*. LEA, Mahwah, New Jersey, pp 179-205.

Wellman, B. (1999a). The Network Community: An Introduction. In B. Wellman (Ed.), *Networks in the Global Village*. Westview Press. Boulder Colorado, pp 1-48.

Wellman, B. & Gulia, M. (1999). Virtual Communities as Communities: Net Surfers Don't Ride Alone. In M. A. Smith & P. Kollock (Eds.), *Communities in Cyberspace*. Routledge, London, pp 167-194.

Wellman, B. & Hampton, K. (1999). Living Networked in a Wired World. Contemporary Sociology, 28 (6): 1-12.

Wellman, B. & Wortley, S. (1990). Different Strokes for Different Folks: Community Ties and Social Support. American Journal of Sociology, 96: 558-88.

Werry, C. (1999). Imagined Electronic Community: Representations of Virtual Community in Contemporary Business Discourse. First Monday. http://www.firstmonday.dk/issues/issue4_9/werry/index.html (last accessed 8/4/03).

Whittaker, S., Issacs, E. & O'Day, V. (1997). Widening the Net: Workshop Report on the Theory and Practice of Physical and Network Communities. SIGCHI Bulletin, 29 (3): 27-30.

Whittaker, S. & Sidner, C. (1996). Email Overload: Exploring Personal Information Management of Email. In Proceedings of the ACM Conference on Computer

Human Interaction, (CHI'96). April 14-18, 1996. Vancouver, Canada, pp 276-283.

Wiesenfeld, B. M., Raghuram, S., Garud, R. (1998). Communication Patterns as Determinants of Organisational Identification in a Virtual Organisation. Journal of Computer Mediated Communication 3 (4). http://www.ascusc.org/jcmc/vol3/issue4/wiesenfeld.html (last accessed 8/4/03).

Wilbur, S (1997). An Archaeology of Cyberspaces: Virtuality, Community, Identity. In D. Porter (Ed.), *Internet Culture.* Routledge, New York, pp 5-22.

Williams, R. (1976). Keywords: A Vocabulary of Culture and Society. Oxford University Press, New York.

Yahoo News (2002). Israeli Software Enables Deaf to Use Cell Phones. Cellular News. December 10th 2002. http://www.cellular.co.za/news_2002/120902-israeli_software_enables_deaf_to.htm (last accessed 8/4/03).

Zaff, J. & Sloan-Devlin, A. (1998). Sense of Community in Housing for the Elderly. Journal of Community Psychology, 26 (4): 381-398.

Zajicek, M., Powell, C. & Reeves, C. (1999). Evaluation of a World Wide Web Scanning Interface for Blind and Visually Impaired Users. Proceedings of HCI International'99. August 22-27, Munich Germany.

Zajicek, M. & Morrissey, W. (2001). Spoken Message Length for Older Adults. Proceedings of Interact 2001. July 9-13, Tokyo, Japan, pp 789-790.