# 이벤트 주도형 소셜 미디어:
## 특유문화 생성을 위한 군중 컴퓨팅 시스템 개발

# Event-Driven Social Media:
## Crowd Computing System Development for Idioculture Generation

임성택, Seongtaek Lim*, 차상윤, Sang Yun Cha**, 박차라, Chala Park**
문지현, Jeehyun Moon***, 이인성, Inseong Lee****, 김진우, Jinwoo Kim*****

**Abstract** This study focuses on event-driven social media (EDSM), which supports the production of unique cultural items of small groups by satisfying the conflicting desires of distinctiveness and assimilation that small groups possess. EDSM is a system which promotes the production of idioculture through small group interaction by using an actual event in which people participate in small groups. By setting up an EDSM system in a university festival in which 10,000 to 15,000 people gather in small groups, idioculture production was tested for approximately eight hours and a half. Interaction records gathered from the test, as well as focus group interview data garnered soon after were used to analyze usage patterns of EDSM, types of idiocultures produced, and resulting factors of user experience. Through this, considerations upon designing future EDSM were proposed.

*핵심어: Event-Driven Social Media, Crowd Computing, Idioculture, Group Interaction*

*주저자, 교신저자 : 연세대학교 HCI Lab, 연구원 e-mail: quasar84@yonsei.ac.kr

**공동저자 : 연세대학교 HCI Lab, 연구원 e-mail: [mikecsy, parkchala]@yonsei.ac.kr

***공동저자 : New York University, Interactive Telecommunications Program e-mail: jm3455@nyu.edu

****공동저자 : 연세대학교 HCI Lab, 박사 후 연구원 e-mail: nuno@yonsei.ac.kr

*****공동저자 : 연세대학교 HCI Lab, 교수 e-mail: jinwoo@yonsei.ac.kr

## 1. Introduction

Web services such as Facebook, YouTube, and Flickr have emerged as popular trends in recent years. YouTube accounted for one-third of the 9.8 billion videos viewed online in the U.S. in March 2008 [12]. In August 2008, Facebook reported having hit the 100th million user milestone [14]. Lately, such web services have been coined as social media. Social media refers to online tools that allow the sharing of contents, opinions, and experiences with groups of people and the facilitation of conversations and interactions such as Facebook, YouTube, and Flickr [16].

One of the main reasons for the immense popularity of social media is that it provides a way for users to express themselves [15]. Behind the growth of social media, there lies a behavioral desire. Humans commonly possess a constant natural desire to express themselves [7]. However, humans not only long to express who they are as individuals, but they also possess an instinctive desire to express the small groups that they belong in [2].

Current social media sites do not provide a suitable environment for small groups to freely express themselves. Although small groups exist in social networking environments, the ability to express as a group is considerably weaker when compared to the ability to express as individual beings. Groups in existing social media merely have virtual strings of connections. The group is not an active entity of its own. There are no activities that a group can do, as a group. Thus, this research proposes a system that can satisfy such desires, and actually design and test whether these desires are satisfied through the system. The ultimate goal of this study is to propose improvements to the design of the system by pinpointing vital elements needed through the test results.

Because current social media environments are unsuitable for expressing small groups as mentioned previously, this research attempted to utilize a different environment rather than the conventional web, an environment known as an "event". We define an event as a physical gathering of people in one place for the same and specific purpose. This specific purpose may include observing, participating, or both. An example of an event is concerts, which are dominated by observing. Other examples include festivals, a mix of observing and participating, and rallies, which are mostly dominated by participation. In this research, an event is utilized as a place where people gather and act in scales of small groups. Being able to observe small groups in an actual physical space is advantageous because the activities of groups exist and can be seen realistically.

In an attempt to combine the characteristics of an event and social media, this research devised what has been deemed as event-driven social media (EDSM). EDSM is a new kind of social medium that can be employed in actual event settings and is useful for observing and expressing thoughts and emotions of not just self but the small group as well. The greatest difference that EDSM has with existing social media is its implementation in real situations. Whereas current social media take form in a conceptual space known as the Web, EDSM can take place in physical space that is shared by individuals and the small groups that the individuals belong to.

## 2. Theoretical Background

### 2.1 Optimal Distinctiveness Theory

Brewer [1] claimed that individuals possess the conflicting desires of assimilation and differentiation through the optimal distinctive theory. According to this theory, individuals desire to seek a sense of belonging based on similarity with others, all the while pursuing distinctiveness by revealing characteristics that stand out. These two motives constantly compete with each other and maintain a "dynamic tension" in which the satisfaction of one motive leads to the increase of the other motive, thus forming a balance [9]. Individuals in conditions that are too personalized will seek belongingness and stability whereas, on the other hand, the motive to express individuality is strengthened in highly inclusive conditions.

As aforementioned in the introduction, this research focuses on small groups rather than individuals. Although optimal distinctiveness theory is intended to explain the behaviors of individuals within a group, a number of research findings suggest that the theory is logically sound with and can be identically applied to small groups that make up a large group [9]. However, it is true that there is a lack of specific research regarding numerous small groups, which belong to a bigger group, that try to express their group identity in order to achieve distinctiveness. This study regards the desires of small groups to achieve identity and distinction among other small groups as motives for

interaction. This research will focus on a system directed towards helping to satisfy such desires and reach an optimal point.

### 2.2 Idioculture

Idioculture is defined as the cultural elements that characterize a certain group [4]. Idio comes from the Greek idios meaning "own". This suggests that idioculture must be distinguished with the common culture of a group. Examples of idioculture include humor and jokes, technical gossip, anecdotes, customs, and nicknames. Idioculture is an assortment of distinct cultural elements, based on small group culture, possessed solely by the members of the group.

Although idioculture is produced through group culture, not all cultures that a group possesses become an idioculture. Fine proposes five conditions for the creation of idioculture [4, 5]. The four "filters", as they are known, are 1) known culture (what cultural items are known to the members of the group?), 2) usable culture (is a certain cultural item forbidden or taboo?), 3) functional culture (is the cultural item on the same track as the goal of the group or the needs of members?), and 4) appropriate culture (does a cultural item harm the social hierarchy of the group or relationships of members?). Among the cultural items that pass through these filters, only items that are triggered by a distinct interaction can be incorporated as the group's cultural repertoire [4, 5]. A triggering event refers to any action or statement that induces interaction within the group based on existing culture [4, 5]. Therefore, the triggering event of an idioculture can be considered as an important condition as well as the ultimate gateway in creating cultural items.

According to Fine [4, 5], a group uses idioculture to create boundaries to distinguish the group. In this point of view, idioculture can be applied in optimal distinctiveness theory as the method for using the small group to seek distinction within a larger group.

Previously mentioned was that the event plays the role of conducing a context for small groups. Furthermore, it can be predicted that the event properties, which have always existed and are known by all event participants, may correspond to the existing culture which takes part in producing small group idioculture.

EDSM is a system that allows the expression of a small group's distinctiveness by producing idioculture. The basic role of EDSM is to cause thriving interaction within a small group. If interaction that act as triggering events take place by going through the four filters as mentioned previously, idioculture is produced based on the existing culture of the small group. Due to the fact that a triggering event, by nature, is a form of interaction, the greater the frequencies of interactions, the more interactions that correspond to triggering events take place.

## 3. System Development

This study chose mobile phones and a large-scale light-emitting diode (LED) display used during the event as the system's tools of communication. The system was designed as to use mobile phone text messages for interaction, and a large-scale LED display was set up in order for all participants of the event to see.

The EDSM system designed in this research can be divided into five parts: a network to receive messages and send feedback, input/output to support a link with external devices, a database to save and process message and video data for the control section and the operation section to display the data onto the LED screen, respectively.

There were two servers responsible for the network and database. Server one consisted of LINUX, MySQL 5, and JAVA. The second server was designed with C# in a .NET Framework and OpenGL library in the Microsoft Windows Server 2003 environment. In addition, a full color LED video vision measuring 6000(W) X 4500(H) mm was positioned at center stage of the main event.

## 4. Method

EDSM was activated in an actual event setting. The EDSM system was installed at the site of a university festival in Seoul, Korea. The reason for the appropriateness of this special setting for this research is that, in this event, people participate in small groups. Although the students belong to a large common group known as the university, the community is divided into diverse small groups. Thus, the event was deemed as an adequate setting to observe the optimal point of assimilation as previously mentioned regarding small groups and their longing for distinctiveness. The annual university festival is a large-scale, recreation-centered event that holds a main stage event and includes invitational concerts by

famous artists, student-led concerts, and school spirit chanting and lasts approximately eight hours and a half, with participants numbering between 10,000 to 15,000. As much as the purpose of the festival is for bonding friendships and instilling school spirit, students participate in the event together with club members, other extra-curricular activity members, and other small groups those exist within the university. In using this opportunity of a large-scale festival to test out EDSM, the following steps of data collection and analysis took place.

### 4.1 Data Collection

Two methods of data collection were used in our research. First, SMS messages sent by participants of the festival to the EDSM system were saved onto the database. The incoming phone number corresponding to the server was notified, and all participants were able to send text messages until the closing of the event. A total of 5,988 SMS messages were garnered. Considering the length of the festival to be around eight hours and thirty minutes, the database consistently collected one message for every five seconds. There were a total of 1,510 participants who sent more than one message each. To those who sent at least one message to the EDSM system, gifts were given through a lottery with prizes worth 100 U.S. dollars. The database recorded a distinct number for each sender as well as a log of incoming message times.

Second, focus group interviews (FGIs) were conducted with participants of the event. A total of 15 participants were recruited two days prior to the university festival. They were given a brief introduction of the system and a 30 minute orientation regarding their tasks. All participants were to participate in the festival and actively take part in sending SMS messages to the EDSM system. An average of 14.3 messages was sent by the 15 participants throughout the event. In the FGIs, questions were asked on the overall usage of EDSM. In addition, messages saved on the database were shown to participants, who were then questioned on their behavior and perception regarding messages they and others sent. Six sessions of FGIs were conducted, with a minimum of one person and maximum of three people per group. After their interviews, participants were compensated with approximately 50 U.S. dollars each and were given a record of their message data.

### 4.2 Data Analysis

Data analysis of participant sent messages proceeded as follows. After quantitatively analyzing the number of total messages according to time, message content analysis was performed. Content analysis was undertaken in order to examine the process of idioculture production through interaction with EDSM. A total number of 5,988 messages were analyzed, and messages were filtered according to whether the messages included items indicating idioculture. These messages were then classified into which type of idioculture was produced.

One of the goals of FGI data analysis is to understand the properties of an event. Event properties are cultural items already possessed by small groups and thus were seen to take part in idioculture production. This is because EDSM becomes the basis for catalyzing idioculture production, and as mentioned in the theoretical background regarding idioculture, these cultural items are to be known, usable, functional, and appropriate. Another purpose of FGI data analysis is to understand the overall user experience of EDSM and derive its resulting items as a system that promotes idioculture production. Data acquired through FGI were analyzed using the open coding process as utilized in grounded theory. Open coding refers to the qualitative analysis method of extracting units of thought from data which, by going through abstraction and generalization, become conceptualized into meaningful concepts [6]. The results of message and FGI data analyses are presented as follows.

## 5. Results

The results regarding usage patterns are consistent with the developmental goal of EDSM with regards to it as being a tool for the expression of small group culture. Thereupon, message data was analyzed with a heavier focus on the theoretical background of idioculture.

In order to confirm the production of idioculture through EDSM, event properties and participants' tendencies were investigated through FGI data. As much as small groups produce idioculture based on the existing culture they possess, it is important to know what distinctive known, usable, functional, and appropriate cultures the university students own. Event properties were extracted from 15 participants in Table 1.

| Event Properties | Examples of Interview Script |
|---|---|

| | |
|---|---|
| Collective | *"You know how they participate in groups rather than as individuals? That's probably why so many messages regarding some club or class popped up so much." (P2)* |
| | *"It'd be different if this was some concert that people can go watch alone, as a university festival, people tend to enjoy having collective tendencies." (P3)* |
| Playful | *"It's fun because we can laugh together, we can all enjoy it together you know? I can post up a certain message, and it doesn't really matter who reads them, as long as they think it's funny, then I'm happy too." (P9)* |
| | *"I think the most important aspect of a university festival is that the participants can all take part and enjoy things together." (P5)* |
| Routine-Breaking | *"Isn't it because it's not routine? I don't think festivals aren't really routine events, and EDSM matches the festival atmosphere pretty well, it doesn't even feel awkward to use it. It's interesting and fun." (P7)* |
| | *"I think the festival atmosphere is like.. really joyful and way up in the clouds. You just feel good for no reason. It's like being a little tipsy, feeling good. Just because it feels good." (P15)* |

Table 1. Event Properties

Based on the cultural items in Table 1, it was presumed that the outcomes of interaction, playing the role of triggering events, would appear in the form of SMS messages. In order to find evidence of this presumption, two coders performed content analysis with 5,988 messages. A total of 3,053 messages, or approximately 51%, were confirmed as idiocultures. Idiocultures gathered and confirmed from the message data are shown in Table 2. To assure reliability, two independent coders were recruited to code the message data. The Kappa ratio between the two coders was 0.813, meeting an appropriate standard of reliability [17]. Discrepancies between the two coders were reconciled through mediation by the authors. Explanation of each cultural item is as follows.

A significant amount of catchwords were garnered in this research. This appears to be due to the tendency of participants to take part in the event as groups. Slogans related to the groups that participants belong to prevailed such as classes, departments, and clubs, due to the fact that this was the most straight forward method of expressing belongingness. The vast amount of catchwords unrelated and without regards to the contents of the event, such as concerts and school spirit chants, suggests that the motive to pursue uniqueness and distinctiveness in the small group level is very high.

The playful atmosphere and breakaway from regular pattern that the festival offers can be seen to have played a role in influencing message content. Most FGI participants revealed that the contents and intentions of their jokes were directed towards members of their respective small groups. Thus, it can be seen that the event's collective properties played an influential role.

Nicknames are a representative idiocultures and can only be used exclusively within a group. They are a useful means to reveal an individual's identity while at the same time express agreement within the group. The playful atmosphere and collective personality of the event can be identified from the number of messages containing references to nicknames.

Many other messages were collected as well. Messages that were speculated to be idiocultures but did not fall into the categories of catchwords, humorous references, and nicknames were classified as miscellaneous idiocultures. In other words, miscellaneous idiocultures refer to messages that are hard to understand, comprehend, or are outright incomprehensive for outsiders (including the researchers) and thus reveals the event's strong small group tendencies.

| Idioculture | Amount | Ratio | Examples of Messages |
|---|---|---|---|
| Catchwords | 1,723 | 56.4 % | *"JazzFeel rocks! ♡♥" (7815)* |
| | | | *"rah rah yonsei phys.ed!!! phys.ed all the way!!!! catch me if you can ♥"* |
| Humorous References | 1,107 | 36.3 % | *"Don't shake that booty too much Byunghoon, your pelvis might get dislocated looool from JG" (2878)* |
| | | | *"Yerim Oh UIC class of '11 is feelin lonely these days ~~~guys come on show her what ya'll got~♥" (4991)* |
| Nicknames | 128 | 4.2 % | *"Waldo~~ where's my blue waldo~~" (8120)* |
| | | | *"curly from school of med curly!!!!" (7115)* |
| Miscellaneous Idiocultures | 95 | 3.1 % | *"Dept of Composition, piece deadline D-25" (3789)* |
| | | | *"Prof Jung please give us an easy o chem exam pretty* |

| | | | |
|---|---|---|---|
| | | | *please ♥" (6021)* |

Table 2. Idioculture Verified By Messages

FGI were used to ask the overall user experience of EDSM excluding the aforementioned cultural items. Resulting factors of EDSM user experience that have been deduced by responses to perception of circumstances directly related to the system are shown in Table 3.

| Resulting Factors of UX | Examples of Interview Script |
|---|---|
| Social Presence | *"Of course not everyone knows me. But the fact that 20,000 people get to see my text on the display, I really felt like I was part of the festival." (P15)* |
| | *"You know how the name of our club comes up on the screen, 'Let's have fun Yonsei Amateur Astronomy Association!' When I see these sorts of messages, I get excited. So my friends and I are looking each other and screaming our heads off. There are a lot of different groups during the festival, so we just want to express that we're here too." (P9)* |
| Social Connectedness | *"I feel something when I'm sending a text message among so many people at the same time and place. As if we're all doing the same thing.. When someone's message is like mine, I think that they're feeling how I feel. So get to wonder where that person is and what group he or she is in." (P14)* |
| | *"You don't know who sent the messages. It's someone, someone around you that's enjoying the event.. and I realize, it's someone among us that's sending those messages, it's like I'm communicating with them…" (P10)* |
| Group Cohesion | *"Looking at the messages together, when we see our messages come up, we're like, 'that was me!!' and we get excited, so shall we say.. bonding? I think we were able to experience bonding too." (P6)* |
| | *"Since I was with my club members, I thought it would be intriguing to see the messages we post together. I was thinking about this since orientation. Like, I've got to send this kind of t ext, expressing how I feel about our club, I mean, where else would I have the opportunity to express something like that? That's why I thought it was such a good opportunity to do it during the festival and create good memories with my friends as well" (P13)* |
| Social Enjoyment | *"If we see a joke together, I thought we could all enjoy it since other people are going to know I'm talking about her. It's actually something I can say directly to Miran, but I just thought we could get a good laugh out of it together." (P8)* |
| | *"Like we're watching something with one topic. Laughing together about one certain topic is more fun, similar to how watching a comedy alone and watching it together with friends makes a difference." (P11)* |

Table 3. Resulting Factors of UX through EDSM

Social presence has been defined by many scholars in diverse views. Among them, Mason [13] defined it as "a sense of being together". This definition, which is from a computer-mediated communication (CMC) perspective and emphasizes the importance of the existence of other humans, is appropriate for explaining the results of this study. Although EDSM is not a tool that allows direct communication with a fixed counterpart as traditional CMC systems support, its importance as a system which enables interactions between humans through SMS must not be overlooked. Many FGI participants replied that they were conscious of the existence of those who would be looking at their messages once the messages were displayed through EDSM. Participants also revealed the importance of the sense of belonging that they felt when their messages were displayed on the screen. As mentioned previously, idioculture can be utilized to pursue group distinctiveness. Idioculture expressed through SMS messages allow boundaries between group members and outsiders become more distinct and thus create a stronger sense of belonging with one another.

Social connectedness refers to one's familiarity with the social world [10]. As a perception of how one is or feels connected to others, social connectedness is an important concept in terms of interaction in the group dimension. An individual that belongs to a particular small group only shares cultural items within that group. The connections between those that share the same cultural item only get stronger due to the fact that it is shared only within their small group. This can be explained through familiarity of each individual towards his or her small group's social world.

Group cohesion indicates the attraction between the members of a group [8]. Idioculture that has been produced by EDSM is a cultural item which only holds value within a group. Therefore, the production and usage of new idioculture creates the effect of increasing interaction in both quality and quantity. Such "meaningful" interactions lead to stronger group bonding.

Social enjoyment is the playful experience that comes with social interaction and shared experiences [11]. Although it is obvious that humorous references are responsible for fun, the fun that arises from the production of idioculture does not merely end with short-term pleasure as jokes do. Rather, the interpretation of jokes within human relationships and enjoying the jokes together leads to social enjoyment. Also, such enjoyment is a cultural item shared only

within a group's premises, which can explain its existence as idioculture. Thus, social enjoyment that takes place through idioculture is an important product in user experience of social media.

Based on the cultural items that are revealed by the event and participants through properties that are collective, playful, and routine-breaking, interaction between small groups and EDSM facilitates a triggering event to produce idiocultures exclusive to each small group. And participants experienced values such as social presence, social connectedness, group cohesion, and social enjoyment while using EDSM. A compilation of the results is shown in Figure 1. Participant P8 provides an excellent example of EDSM user experience.

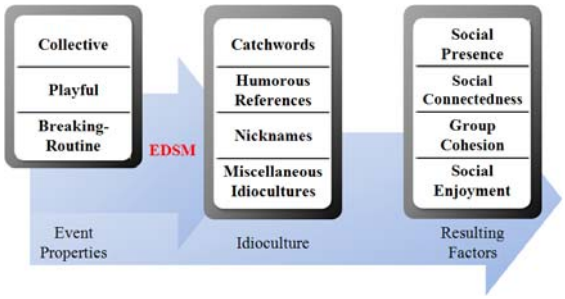


Figure 1. Proposed Framework for Production of Idioculture through EDSM

*"I went to the festival with my class friends (**small group and their culture**), and while we were watching one of the concerts, one of my friends Miran sat on my lap. So I sent a message without her knowing (**interaction as a triggering event**). I wrote, 'Miran, you're so heavy! LOL' (**idioculture: humorous references**) I thought if our whole gang saw it, we'd all have a good laugh and enjoy ourselves. If I'd told her she's heavy, it wouldn't be any fun since I can't share the moment with the others. (**social enjoyment**)." (P8)*

## 6. Design Implication

### 6.1 Message Expression Method

This research attempted to activate the EDSM system at a university festival. Due to the constraining conditions of having to display the live event on the LED display, messages were displayed near the top screen flowing right to left like subtitles (Figure 3). If it becomes possible to identify participants and their respective small groups, a dynamic message threading layout could be devised. Such a direct messaging expression method would further promote interaction between group members.

According to the optimal distinctiveness theory, as previously mentioned, the optimal point between distinctiveness and assimilation enhances the interaction of group members. Distinguishing one small group from another through messaging is predicted to create harmonious interactions. Without a clear distinguishing between groups, no message can hold any meaningfulness whatsoever with regards to inter-group communication. Although not a direct reference to message threading, one FGI participant expressed a longing for clearer distinction between small groups.

*"It'd be neat if the messages of all the people I know are grouped into one space. Messages of people I don't know, they could be interesting but I can't really relate to them, and it's not like I understand them even." (P9)*

According to FGI data, the message layout was also found to have a possible influence in the psychological aspect of user experience.

*"It would be interesting to display the messages like post-its instead of subtitles. The post-its can make shapes as they get attached. Obviously the first person to post up a post-it will have no clue as to what shape it'll form, but once people start adding to it, an outline can form you know? Then people will be like, 'I gotta fill up that outline' and start sending messages. When the shape becomes full, it makes people feel like they've participated in something…" (P7)*

Message expression method is not just vital as an important element in the production of idioculture, it is an element worthy to be considered in order to design EDSM in a more interesting way.

### 6.2 Recalling Small Group Culture

The main reason for the selection of the mobile phone as the user appliance was due to the fact that the mobile phone is one of the most common and widely penetrated personal communications tool. However, aside from the fact that mobile phones are widely used, the reason for the selection of SMS messaging was because messages are able to visualize idiocultures in the form of text.

*"Photos simply depict the situation, whereas text allows you to think and recollect your memory. With pictures, you can know the situation right away, while text requires some thought, they're different. Liveliness could probably be captured in pictures better… but text is also attractive in the way that it helps you retrace your memory." (P15)*

Existing research on visualization suggest that labeling texts on vague objects not only emphasize the recalling of the objects but also help person to actively process the information through activation of the cognitive process [3]. Thus, visualizing idioculture through text was effective in recalling the vague object that is small group culture. A participant's opinion regarding recalling is presented as follows.

*"Collecting the messages is like an album of memories… It's not like, 'let me take these pictures and make an album out of it,' it's more like… I sent a simple text message, and all the messages that*

*people send get piled up… Like looking at an old blog posting and reminiscing, remembering what I wrote… I can remember all the fun I had during the time through the message, and I could always look it up again and reminisce again." (P15)*

Through this method, a new proposal can be deduced to effectively utilize collected message data. By dividing up the message data into timeframes, a micro-blog style page such as that of Twitter.com could be created. The advantage of utilizing data in such a way is that it may provide a service that is original yet focused towards the continual communication of small groups.

### Feedback

FGI participants responded that the most important aspect of the system is its feedback. At timeframes when EDSM was being heavily used, it took approximately five minutes for the messages to be sent by users, be registered in the system, and appear on the display. FGI participant P15 described the feedback (having the participant's message on display) as 'as if I were on TV'. Relating to idioculture, feedback is a vital element of EDSM in expressing identity. One FGI participant brought up the importance of feedback from a different perspective.

*"Messages have to pop up right away for it to be fun, but when I did it, some of my texts didn't even get onto the display, others were late, and so the fun factor decreases. Certain interesting situations take place when the messages are displayed. If we can see it together right away and a fun circumstance could arise. The lateness, it cuts off the flow and lowers the fun." (P8)*

This interview script emphasizes the importance of feedback as an "event-driven" social media. Because event participants use this system while enjoying the event, being able to express emotions or thoughts and sharing them real-time is an important point to consider.

## 7. Conclusion

By providing EDSM in an event setting and promoting interactions that act as triggering events, the production of idioculture within small groups was observed. Production of idioculture such as catchwords, humorous references, and nicknames were verified, and those who were part of this idiocultural process were able to experience social presence, social connectedness, group cohesion, and social enjoyment as a result. Conclusively, three important elements in designing and carrying out EDSM message expression method, supporting recall, and feedback were deduced and proposed as improvements to the system.

Certain limitations exist in this study. Because this research contained only one test case, procedures such as multiple test case comparisons were not able to be conducted. Events with different properties in different cultures are sure to bring up new implications. Another limitation was the inability to utilize multimedia messaging system (MMS), which is a form of messaging that includes images and sounds as well as text, due to the large scale of the event and also worries of system overload. If MMS-based EDSM was tested, more diverse ideas on system utilization and user experience may have been deduced. In addition, the hows and whats of group interactions and their motives have yet to be investigated. The significance of this study lies in pinpointing the fact that the motives of small groups in seeking distinctiveness can be converted into the desire for communication in the condition of having already achieved a sense of identity with the outside world.

Based on this research on small groups and interactions within, future studies must specifically focus on the contents of interaction within small groups. These potential studies will play key roles in unthreading the mysteries beyond individual interaction.

## References


1. Brewer, M.B. The Social Self: On Being the Same and Different at the Same Time. Personality and Social Psychology Bulletin, 17, 5 (1991), 475-482.

2. Brewer, M.B. and Weber, J.G. Self-Evaluation Effects of Interpersonal versus Intergroup Social Comparison. Journal of Personality and Social Psychology, 66, 2 (1994), 268-275.

3. Dahl, D.W. and Hoeffler, S. Visualizing the Self: Exploring the Potential Benefits and Drawbacks for New Product Evaluation. Journal of Product Innovation Management, 21, 4 (2004), 259-267.

4. Fine, G.A. Small Groups and Culture Creation: The Idioculture of Little League Baseball Teams. American Sociological Review, 44 (1979), 733-745.

5. Fine, G.A. Shopfloor Cultures: The Idioculture of Production in Operational Meteorology. The Sociological Quarterly, 47, 1 (2006), 1-19.

6. Glaser, B.G. and Strauss, A.L. The Discovery of Grounded Theory. Aldine Publishing, 1967.

7. Goffman, E. The Presentation of Self in Everday Life. Doubleday, New York, 1959.

8. Hogg, M.A. Group Cohesiveness: A Critical Review and Some New Directions. European Review of Social Psychology, 4, 1 (1993), 85-111.

9. Hornsey, M.J. Subgroup Differentiation as a Response to an Overly-Inclusive Group: A Test of Optimal Distinctiveness Theory. European Journal of Social Psychology, 29, 4 (1999), 543-550.

10. Kohut, H. How Does Analysis Cure? International Universities Press, New York, 1984.

11. Lindley, S.E. and Monk, A.F. Social Enjoyment with Electronic Photo Displays: Awareness and Control. International Journal of Human-Computer Studies, 66, 8 (2008), 587-604.

12. Lipsman, A. YouTube.com Accounted for 1 Out of Every 3 U.S. Online Videos Viewed in January. http://www.comscore.com/press/release.asp?press=2111, 2008.

13. Mason, R. Using Communications Media in Open and Flexible Learning. Kogan Page, London, 1994.

14. McCarthy, C. Facebook Hits 100 Million Users. http://news.cnet.com/8301-17939_109-10025811-2.html, 2008.

15. Sanderson, J. The Blog is Serving Its Purpose: Self-Presentation Strategies on 38pitches.com. Journal of Computer-Mediated Communication, 13 (2008), 912-936.

16. Social Computing Magazine. Wikipedia's 'Social Media' Definition is 'Misleading, Incomplete, and Uninformative,' Says Solis. http://www.socialcomputingmagazine.com/viewcolumn.cfm?colid=424, 2007.

17. Someren, M.W.v., Barnard, Y.F., and Sandberg, J.A.C. The Think Aloud Method: A Practical Guide to Modeling Cognitive Processes. Academic Press, San Diego, CA, 1994.

18. Turner, J.C. Social Categorization and the Self-Concept: A Social-Cognitive Theory of Group Behavior. in Lawler E.J. ed. Advances in Group Processes, JAI Press, Greenwich, CT, 1985, 77-122.