A Pattern Language for an Open Academic Society with Non-professional Users

Koichiro Eto
National Institute of Advanced
Industrial Science and
Technology (AIST)
1-1-1 Umezono, Tsukuba
Ibaraki, Japan
k-eto[at]aist.go.jp

Tom Hope
Tokyo Institute of Technology
Ookayama 3-36, Meguro-ku
Tokyo, Japan
tomhope[at]ipo.titech.ac.jp

Hideaki Takeda
National Institute of
Informatics (NII)
2-1-2 Hitotsubashi,
Chiyoda-ku
Tokyo, Japan
takeda[at]nii.ac.jp

ABSTRACT

Today we are seeing rapid growth in variety and quality in the world of user generated contents. In some remarkable cases, the creators have developed their own technology and created unique systems. In such cases, this content is also of potentially high value as technology research in its own right. But so far the research community does not have a method to exploit this potential resource. Therefore, we have proposed a new kind of academic society, which we call "NicoNicoGakkai Beta," to promote user participatory research with non-professional users. In this paper, we describe the background, the concept and the overview of the academic society. We present a "pattern language" documenting the ideas that guides its design, and we report on the outcome of this approach to date.

Categories and Subject Descriptors

H.5.m [**Information Interfaces and Presentation (e.g., HCI)**]: Miscellaneous

General Terms

User Generated Contents, Consumer Generated Media, Nico Nico Douga, NicoNicoGakkai, Participatory Design

Keywords

social media, collective intelligence, interaction design, social computing, CSCW

1. INTRODUCTION

We are currently seeing a strong trend of popularity of User Generated Contents (UGC), also known as Consumer Generated Media (CGM). In the past, users were only recipients of contents, but users have now become creators and publishers themselves. For example, we can see CDs created by users at the top of the music charts. The quality of UGC is evaluated as high quality all over the world.

Some researchers are interested in this UGC phenomenon. In the UGC research field, the focus tends to be on the mechanism of how systems support creativity. For example, how does the contents sharing system enhance the creativity of users? What kind of mechanism enlarges the number of videos by users? How do the users feel toward other users? We recognize such kind of research topics. There are also the technologies used to facilitate contents creation. In the production of contents, it is necessary to combine voice, image, video and so on. How can we facilitate the creation of contents by users? We can also see such research topics.

On the other hand, contents created by the user are manifold. Online videos with the "**I tried to make**" tag represent the creation of something by users. For example, some users create a new technology, new kinds of machines. When we look at such new technology development by users, it can be understood more like "**research**" rather than just contents. We think these types of contents should be tagged as "**I tried to research**". We believe that there are two areas of research in the UGC research field. One is to research the UGC phenomenon itself, conducted by professional researchers. Another is "research by non-professional researchers". On the basis of this idea, we built a new kind of academic society "**NicoNicoGakkai Beta**". In this society, users directly do their own research. We call this phenomenon "**user participatory research**" and we call non-professional researchers "**wild researchers**". We, professional researchers and wild researchers give presentations together in a symposium. We created an academic organization "NicoNicoGakkai Beta Executive Committee" on the basis of this concept, and we launched "**The 1st NicoNico-Gakkai Beta Symposium**" in December 2011. After that, we held seven large symposiums in these last four years.

In this paper, we present the brief history of the society, and show nine small design patterns of the society.

2. PHILOSOPHY OF NICONICOGAKKAI BETA

In this section, we describe the philosophy of NicoNico-Gakkai Beta by presenting a brief history and the manifesto for user participation research.

2.1 The need for a new research organization

First, let us look back briefly at the birth of UGC in Japan.

In December 2006, DWANGO Inc. launched a new video-sharing site "**Nico Nico Douga**"[1]. Initially, they used the YouTube service as a video sharing platform and they overlaid their own video comment system. After YouTube prohibited this usage, they built their own video-sharing site independently.

In August 2007, Crypton Future Media, Inc., released a singing synthesizer software called "**Hatsune Miku**"[2]. Based on "Vocaloid" technology invented by Yamaha Corporation, they created a virtual singing idol "Hatsune Miku" assembling voice actress Saki Fujita's voice and illustrations by Kei. The company append an illustration and characteristics for Hatsune Miku. Many users used Hatsune Miku to create their own music with vocal voices. Not only music was created, they also started to create Computer Graphic images and videos of Hatsune Miku and then showed the movies on Nico Nico Douga.

At that time, users could make their own music using instruments such as synthesizers, but they could not create the vocal tracks for the music. With the birth of Hatsune Miku, users began to create whole music compositions with vocals also created by themselves. From this, the trend began that they would create music themselves and publish it on the video sharing site. Crypton Future Media, Inc. also released a new license called "PIA Pro-character license[3]" that allowed users to use Hatsune Miku freely for non-profit use. Thanks to this license, many users created movies and software with the Hatsune Miku character. Another movement also began with the license: A user created some 3D modeling software called MikuMikuDance (MMD)[4] that allowed users to create a movie of dancing Hatsune Miku.

During this period, the explosion of contents began. Nico Nico Douga and Hatsune Miku had a strong relationship and great many videos were created. A user would upload their music, and another user would attach their graphics and publish it as a new movie on Nico Nico Douga. Satoshi Hamano named this **chain of creation** as "**the Nth creation**." [4] In this way, Nico Nico Douga grew into the most important platform to support UGC in Japan.

The UGC continued to improve and began to surpass the contents created by professionals. In this situation, the difference of equipment between professionals and non-professionals became trivial. Originally, this change happened in the world of software development and was called "open source software development". For example, Linux OS is of a quality high enough that many people want to use it. Collaboration between an unspecified number of developers on the Internet developed high-quality software.

Some researchers have found their research topics in the field of UGC. In 2008, Satoshi Hamano analyzed the structure of Nico Nico Douga by using the term "architecture"[7], and extracted the concept of Nico Nico Douga with the term **pseudo-synchronization** and **the Nth creation** [4]. In 2008, the Information Processing Society of Japan planned an invited talk of Mr. Akihiko Koizuka, the developer of Nico Nico Douga[5]. In 2010, Masahiro Hamasaki of AIST, analyzed the large-scale activity network of cooperative creation in Nico Nico Douga[8, 9]. In 2010, Masataka Goto of AIST produced a special session of the IPSJ Annual Symposium "Present and Future of CGM World opened by Hatsune Miku, Nico Nico Douga, PIA Pro"[6]. We began to think that we should broaden the cooperation between research areas regarding UGC, to study the UGC field deeply. In contents production, many kinds of technologies are used seamlessly such as audio, video, computer graphics, user interface and Web. We thought that it is effective to start a new study group for UGC, or to link existing related study groups. However, simply starting this new study group would not, we believed, be enough to study this movement, because, as part of this movement, users also had developed new technologies on their own, to create new kinds of contents. For example, MikuMikuDance software created by a user is high quality and a large number of users use it to produce new movies. We thought, therefore, that we should have relationship with these kinds of users.

This situation is close to the example of open source software described above. In the world of OSS development, unlike in common software companies, the number of developers who create the software is unspecified. We thought that there would be a similar kind of change in the field of research. In software development, software developed by the user is of a sufficiently high quality. We needed to think about the difference between software development and the IT research field.

We believed that the changes that occurred in the contents or software development field would also occur in the research field. If so, we would like to welcome the change and also accelerate it and suggest a kind of new research field by users, **user participatory research** , building on the term "user generated contents". Consequently, we wanted like to create a new kind of place to publish and communicate the research results with traditional professional researchers of universities and research organizations and wild researchers, an unspecified number of users. For example, a user might develop something and a professional researcher could expand the result. Or a company could create a new product based on research results generated by users. We thought that we should have such a kind of research place that mixes many kinds of research results with users. Thus, we decided to launch a new kind of academic society **NicoNicoGakkai Beta** with the aim of pursuing user participatory research.

2.2 Manifesto for user participatory research

To inform the idea of NicoNicoGakkai Beta to the users, Eto posted **NicoNicoGakkai Beta manifesto** on the Web site. He described this manifesto to call on users to participate in user participatory research. In this document, the user could see the concept of user participatory research. We post the manifesto here (translated from Japanese into English).

Let's build the world of user participatory research

Does it sound difficult when you see "research"? How do you feel with "I tried to research"? Do you think you can do something for it? The term "research" represents a kind of format of thought. We named a process that we make a

---

[1] http://www.nicovideo.jp/
[2] http://www.crypton.co.jp/mp/pages/prod/vocaloid/cv01.jsp
[3] http://piapro.jp/license/pcl
[4] http://www.geocities.jp/higuchuu4/
[5] http://www.ipsj.or.jp/09sig/kaikoku/2008/HCI130.html

[6] http://staff.aist.go.jp/m.goto/IPSJ/event20100310.htm

hypothesis for a certain assumption then validate it as "research". Anyone can run the process. Then, let's consider your own hypothesis for your own assumption. Try to validate it in your own way. And if you find an interesting result for the process, let's publish the result as a video with an "I tried to research" tag. With this, you become a researcher.

Niconicogakkai Beta is your organization

How do you feel about "Academic Society"? How about "The Beta version of Academic Society"? Does it feel slightly softer? "Academic society" is a place to exchange ideas regarding research. When you have an interesting result, you feel you'd like to tell the result to others. First, let's publish your result online with the "I tried to research" tag. If you want to talk with others about your research result, how about doing a presentation at the "NicoNicoGakkai Beta Symposium"? There is no qualification to participate NicoNicoGakkai Beta. NicoNicoGakkai Beta is an academic society for the rest of us.

We recommend you to publish your research results as an online video

Do we need to write a "paper" for research results? Writing a paper seems very hard for us. Writing "papers" are a very efficient way to tell the research result others. But, if you are not concerned about efficiency, there are many way to transmit research results. For example, how about creating a movie of your research result and publishing it online? If the movie is interesting enough, the people around the world can see your movie.

We will pursue the values of the user participation field

NicoNicoGakkai Beta starts from the user participatory contents field. Thus, we'd like to pursue the values of user participatory contents. The user participatory contents has a close relationship between the place to share and to create the contents. Therefore, we would like to promote and protect research about such a place.

We are an academic society built on online and offline media

Do you know why we researchers gather together regularly? Because, we need to show our progress of research and to exchange ideas about it in each research field. But, we can put comments on online videos, and the author can respond to the comments. On the other hand, it's still important to meet face to face. NicoNicoGakkai Beta wants to be the place combining the merit of online and offline meeting. And create a new kind of place over the boundaries of online and offline media.

We will diversify the values of research

We believe that there is a variety of values in "research". The industrial and academic values are important, but cultural and artistic values are also important. We see the values inside the research activities itself, and we are also very happy if we have many responses from other users. It also has high value. Multiple values become the driving force to promote our own research.

We are the beta version of an academic society

We mean we are the beta version something like beta version software. We need feedback from users to become a real academic society.

We run this project for only five years

There are reasons that academic societies should last as long as possible. Because the academic society is intended to protect and promote the values of science, they need enough power to protect it from others. However, there are also negative effects to this. We believe it is difficult to respond to the changes of environment. We will continue our project for five years. And then, we finish the activity. We do not know what will happens after that.

In this way, we asked users to participate in the movement of user participatory research, and started a new academic society with professional and non-professional researchers.

3. RELATED WORKS

We explain the several related topics here.

User generated contents (UGC) In 2006, the Nico Nico Douga phenomenon started in Japan. It's impact is very strong. User participatory research activities began as a part of the Nico Nico Douga phenomenon. The research results are published under the rule of UGC. Clearly, this a part of the UGC phenomenon.

Open Source Software(OSS) development Open source software development is very important in that it shows that the software development by the user can be a sufficiently high quality. However, as a concept, is slightly different to user participatory research. In OSS, software that functions is distributed. In user participatory research, the research results are published in different forms such as videos.

Open research, Open-source science Open research or Open-source science is research conducted in the spirit of free and open source software[10]. This permits a massively distributed collaboration, and one in which anyone may participate at any level of the project. It is an approach that opens data, method, peer review, and analyses results related to research on the Internet.

Science 2.0 Science 2.0 is a suggested new approach to science that uses information-sharing and collaboration made possible by network technologies[11]. In Science 1.0, the research results are first shared when they appears as a paper. In Science 2.0, the research results (e.g. intermediate data) are shared even if the analysis is not finished.

Citizen science Citizen science (also known as crowd science, crowd-sourced science, civic science, or networked science) is scientific research conducted, in whole or in part, by amateur or non-professional scientists, often by crowdsourcing and crowdfunding[5]. It is the science version of crowdsourcing. Professional researchers outsource a part of their research projects. For example, in Zooniverse[7] the users cooperate in the generation of classification data in astronomy by classifying the shape of galaxies observed.

---

[7] http://en.wikipedia.org/wiki/Zooniverse_(citizen_science_project)

Differences

There are several differences between the above and NicoNicoGakkai Beta.

1. NicoNicoGakkai Beta attempts to broaden the people involved in research activities. In Science 2.0, for example, they attempt to increase the number of people using the Internet technology, to promote science. However, the contents or methodology of science itself is not changed.

2. NicoNicoGakkai Beta, is a hybrid of professionals and non-professionals. Its focus is not only on non-professionals.

3. In NicoNicoGakkai Beta, we use the Internet technology especially for UGC. We do not focus on sharing data for research.

4. Our activities in NicoNicoGakkai Beta are focused on outreach of science. Through the activity, we would like to expand the science community, not only professionals but also non-professionals.

5. Building a community is essential to NicoNicoGakkai Beta. To care for the motivation of participants, presenters and staffs, are important to the project. The gathering of contents on its own is not enough. The story is very important. To create new terms, such as "wild researchers", is a part of the essence of NicoNicoGakkai Beta.

4. PATTERNS

We carefully designed this society as a new kind of event so that non-professional users can join. We extracted nine patterns from the society design. "Borrow the Name", "Wide Frontage", "Attractive Difficulty", "Share Research Results as Video", "Mixture of Professionals and Non-professionals", "Broadcast Symposium Online", "Symposium at Special Venues", "Extremely Fast Presentation", "Goal Set".

Figure 1 shows relation between the patterns.

4.1 Pattern Format

Pattern Language is an architectural design theory proposed by an architect Christopher Alexander[2, 1]. Pattern Languages are widely used in software development now[3].

In Pattern Language, there are typical pattern language forms to summarize "good knowledge" which enable people to reuse the ideas.

In this paper, we summarize the patterns into 6 items, "Context", "Problem", "Forces", "Solution", "Result", and "Specific Case". We show the references to other patterns as **"Pattern Name"**.

Context: Show the background and assumptions of the problem.

Problem: Show the specific details of the problem.

Forces: Indicates the causes and various forces surrounding the problem.

Solution: Shows a concept and an effective method to solve the problem.

Result: Shows what will happen after the problem has been resolved.

Known Uses: Shows the real examples of the patterns are actually observed.

4.2 Why Pattern Language?

Why we build a pattern language from NicoNicoGakkai Beta activities? The purpose of NicoNicoGakkai Beta, to build an academic society for hybrid of professionals and non-professionals, is new. Accordingly, to establish such new activities, it is necessary to establish a new kind of methodology for the design of the society.

To build the methodology for a new kind of society, these may be conflicts with traditional associations. However, the methodology should be aligned well with the rules surrounding it, and should be connected smoothly with the others. It is similar to describing "good design" in the world, which is one of the purposes of Pattern Languages. Thus, we adopted a pattern language to describe our NicoNicoGakkai Beta activities.

We limit our activities for five years. We would like to leave methodology as a result of our activities.

At the moment, five subcommittees of NicoNicoGakkai Beta have already started. The five subcommittees are as follows: "Data Research Group", "Fungus Broadcasting Station", "Cosmology Research Group", "Athletic Meeting Research Group", "Meteorology Research Group". These subcommittee activities are expected to remain after five years. From these points of view, we believe that it is necessary to leave our NicoNicoGakkai Beta activities as a pattern language.

4.3 Borrow the Name

Context: To communicate the concept, the names are very important.

Problem: It is difficult to give a comprehensible name for new concept.

Forces: In general, the name of academic society is given accordingly with the subject of research. However, there must not be the restriction that we must give a name accordingly with the subject.

Solution: Let's borrow the name from that which is already successful.

The name "NicoNicoGakkai Beta" comes from Nico Nico Douga. As we describe above, NicoNicoGakkai Beta began under the influence of UGC, especially Nico Nico Douga. We respected Nico Nico Douga very much and wanted to create an academic society in a similar style to Nico Nico Douga. Thus we used the name "NicoNicoGakkai Beta" under the permission of Niwango, Inc. "Gakkai" means academic society in Japanese. Also, the "Beta" indicates that the society is a kind of trial version like beta version of software. It begins as the beta version.

In addition, we use the term "wild researchers" as non-professional users to promote this idea. The terms "amateur researchers" or "opposition researchers" are traditionally used for non-professional researchers but we would like to combine professionals and amateurs, and, in the sense of "natural born researchers", we decided to use the term "wild researchers". At the same time, the term "wild professional" is used at Nico Nico Douga. Thus, we also borrowed the name "wild researchers" from Nico Nico Douga.
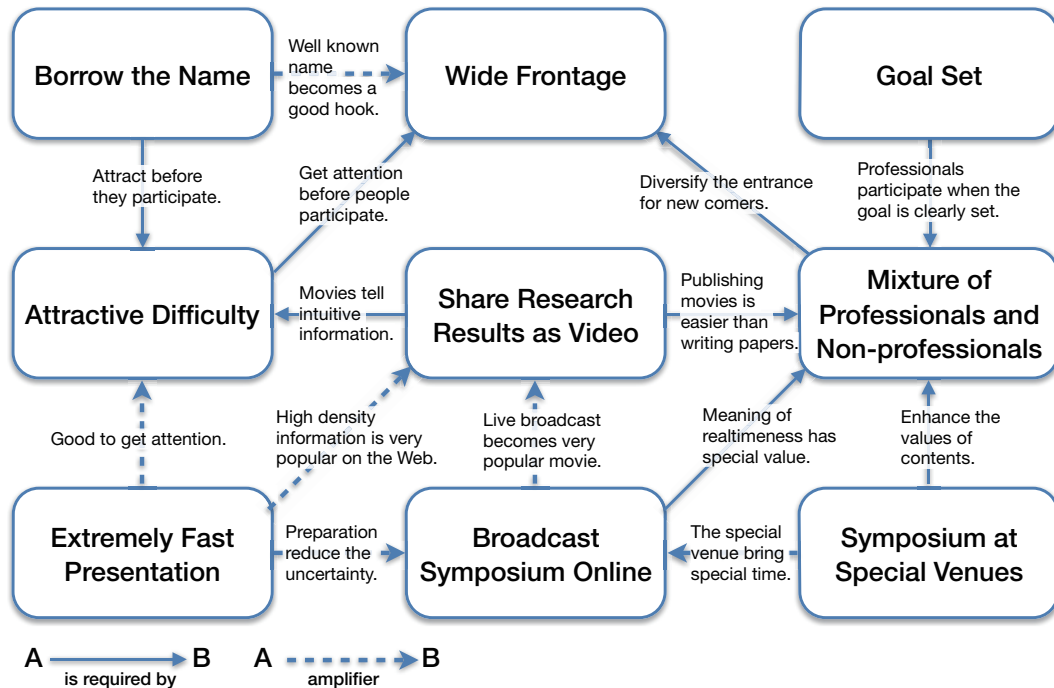
Figure 1: Pattern map of the pattern language.

Result: Many users recognize NicoNicoGakkai Beta as a Nico Nico Douga version of an academic society.

Known Uses: "NicoNicoGakkai Beta", "wild researchers", "I tried to reseach", these are the names that are borrowed from Nico Nico Douga.

4.4 Wide Frontage

Context: Not so many people join the research community.

Problem: It is hard to join the research community. There are few easy entrances and it is hard to join as LPP (Legitimate Peripheral Participation)[6].

Forces: The entrance for the research community is just to publish a paper, submit it, and do presentations.

Solution: Let's diversify the entrance to the research community.
If there are online videos about a research result, users can watch it and send comments online. If there is online live broadcasting, users can watch it and put comments or tweet comments. If there is a real event for the general pubic, users can attend in the venue and tweet comments. If the organizer collects money by using crowdfunding, users can pay money for it. If the organizer conducts a comittee meeting in the public area, users can easily join the meeting. If the organizer calls for participation as staff, users can join as staff. Of course, users can also do research and publish it and do presentations.

Result: Many users can join the event. If we provide easy entrance for research community, more users can join us.

Known Uses: Show videos online, live broadcasting, crowdfunding, call for participation as staff, summer camp, publish books, lightning talks, general public session.

Related Patterns: This pattern is related to "Share Research Results as Video", "Symposium at Special Venues", "Mixture of Professionals and Non-professionals".

4.5 Attractive Difficulty

Context: There is so much contents online. To get attention is very difficult but important.

Problem: Usually, research results are only for professionals. Consequently, the divide between professionals and non-professionals is enhanced.

Forces: The contents for professionals are complex. It is necessary to detail explanation, but detailed explanations take a long time. It is difficult for such contents in the competitive attention situation.

Solution: Let's tell your contents attractively.
Not easily understandable, but easily get interested. Nowadays, there is so much contents on the Web rather than in schools or academic societies. Many people say "detailed information is on the Web". Thus, it is not necessary to provide detailed information, but to provide information that people can be interested in.

Result: Many users want to see it. If someone is interested

in it, they can find the contents on the Web and maybe they understand it.

Known Uses: Rapid 100 Research Presentation, "Research Trial Madness".

Related Patterns: This pattern is related to "Extremely Fast Presentation", "Share Research Result as Videos".

4.6 Share Research Results as Video

Context: We have to write a paper to publish the research results.

Problem: It is not easy for non-professionals to write a paper. We need special training to write.

Forces: Professional researchers traditionally use the paper format to inform the research result effectively. But if efficiency is not the top priority, you have a choice to use another format to publish your research result.

Nowadays, many users upload videos or write blogs. The important point is to tell the research result to others with reproducible information. You do not have to worry about compatibility with existing papers.

Solution: Let's publish your research result as a movie online.

Many users have already uploaded videos as the results of research activities. It is necessary to include hypothesis and verification to tell a research result. Then, the users include them in video format.

In this present time, users are usually kept online. When other users see the video, they have some questions, and just send comments online on the video. The author can also respond using comments. Thus, the overview of the research result can work. In that way, questions and answers function well to inform others of reproducible information as a result.

Result: Many users have uploaded videos as their own research results.

Known Uses: In the "Research Trial Madness" session, many users uploaded research results online.

- KURATAS: 4m height robot that people can ride.

- Skeletonics: exoskeleton robot that people can attach.

- Amid Screen: a half transparent screen by using mosquito screen. They can produce a big screen very cheaply.

4.7 Mixture of Professionals and Non-professionals

Context: Nowadays, there are many divisions of professional areas. This divides professionals and non-professionals deeply.

Problem: Yet, it is necessary to do research with vitality and sense. It is not essential that one is a professional (has job related to research) or not.

Forces: The research world is divided into many parts and funding is not so important at this area. The vitality for research is more important. But the form of participation has not changed.

Solution: Let's do presentation with a mixture of professionals and non-professionals.

Let's do a science event, not only for one side, but for both sides.

Result: The participants and viewers can see both sides of research. Then, the event becomes a place to meet professionals and non-professionals.

Known Uses: In our symposium, "Rapid 100 Research Presentation" by professional researchers, and "Research Trial Madness" by non-professional researchers are in same timeline.

Related Patterns: This pattern is related to "Broadcast Symposium Online", "Symposium at Special Venues".

4.8 Broadcast Symposium Online

Context: Usually, research presentations are in symposiums or conferences. But in general, such events are for professional researchers.

Problem: Usually, non-professionals do not know the existence of symposiums or conferences. Even if they know the events, it is hard to attend the events.

Forces: Usually, the symposiums are for professionals. However, professionals often want to tell their knowledge to the general public. They frequently find ways to tell their knowledge to the public.

In general, people like the scientific knowledge. For example, watching science TV program is very common. Science presentations are usually only for other professionals. But some people feel interest for the presentations.

Solution: Let's live broadcast symposiums online.

In Japan, many symposiums are already broadcasted live online. They usually use the Ustream platform.

However, there is a NicoNico Live platform by Dwango Inc. By using NicoNico Live, users can put their comments over the live broadcast screen so users can see the opinion of other viewers in real-time (fig.2).

For example, users can send questions using comments. If other users know the answer, they can respond to the questions. In this case, users can enhance the symposium.

Result: Many users can watch the symposium over the Internet.

Known Uses: At the 1st NicoNicoGakkai Beta symposium, there were over 100,000 viewers.

4.9 Symposium at Special Venues

Context: Usually, the venues of symposiums are conference centers or campuses of universities. Universities are a good place to promote research, but it is disconnected from general public in many cases. The conference centers have enough facilities to do symposium but the space is too general; they do not have a suitable character for the space.
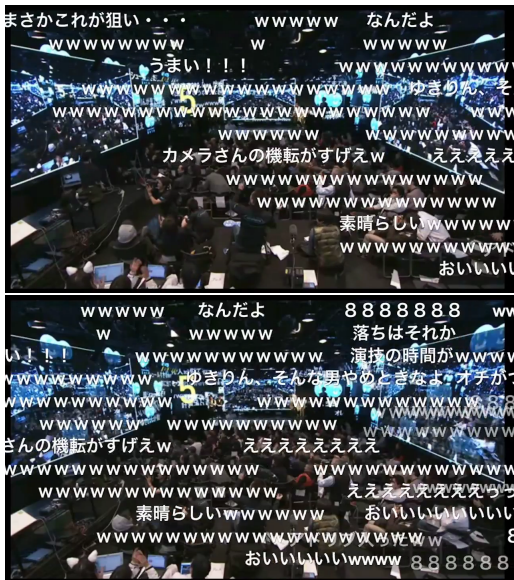
Figure 2: Comments are flow over the live broadcasted sceen from right to left.

Figure 3: The venue of Nicofarre.

Problem: The venues, conference center or university campus are disconnected from the general public.

Forces: To organize a symposium, we need facilities for the space. Of course, conference center and university campus have the facilities. We can organize symposium by using such venues.

Conversely, there are TV programs for the general public. Usually, TV stations provide television programs. They create the contents of television programs for general consumption. Of course, researchers cannot control the final results of the televised programs. The researchers only provide the source of research results.

It is interesting if we can do presentations somehow in the TV program style. By using such a studio, users can hold a symposium in such style.

Solution: Let's hold a symposium in a special venue.
There are some special venues that have special values for Japanese Internet users. In Japan, there are "Nicofarre" and "NicoNico Chokaigi".

Figure 4: The venue of NicoNico Chokaigi.

"Nicofarre" is a venue that is dedicated to NicoNico Live (fig.3). Four sides of the hall are covered with LED displays. In the venue, comments from NicoNico Live are streamed on the wall. With this system, the presenters can see the feedback in real time.

"NicoNico Chokaigi" is a big real event by Dwango Inc (fig.4). The concept is to "Reproduce Nico Nico Douga in Real World." Almost 100,000 people gather together in a huge venue. They show their own contents in the venue. To hold the symposium in such venue, many users can recognize the existence of the symposium and watch it.

Result: So many users recognize the existence of symposium and watch it.

Known Uses:

- Nicofarre: a live house in Roppongi Tokyo.

- NicoNico Chokaigi: a big real event by Dwango Inc. People gather and show their own products.

4.10 Extremely Fast Presentation

Context: In general, research presentations are for professionals. For non-professionals, detailed background or related research is not necessary. People want to know the core idea of the research.

Problem: The presentation style is usually optimized for professionals. It is not specified for non-professionals.

Forces: Many professionals are familiar with the basic presentation format in the science field. However, professionals don't know how to organize presentation for the general public.

Ordinary people do not know the core of a research presentation.

Solution: Let's do presentation with in super short time.
In the "Rapid Fire Research 100", five researchers will do a presentation within 90 minutes. One researcher does 20 presentations, thus the total becomes 100 presentations. In this session, one research presentation is shorter than 1 minute. Since it is less than 90 minutes in total, that means one research presentation is less than a minute. Usually in professional settings, one research presentation is 15 to 30 minutes

long. Therefore, we can see the presentation a lot faster in this session.

With this situation, the presenter needs to think what is the core idea of their research. The researchers extract the core ideas as to be as short as possible. This has a dramatic effect, transforming the core idea of research into an understandable form .

The advantage of "Rapid Fire Research 100" is to do 20 presentation continuously. Usually, researchers have recognized their research as a connection between each research topics.

For example, they did a certain research result, then connected to the next research theme. Each researcher has their own story. To do 20 research presentations at once means that the researcher tells the story behind their research activities. That means the presentation becomes a life story of the researcher.

Result: With the personal history of a researcher, concrete research results becomes an elegant presentation in a quite understandable form.

Known Uses: "Rapid Fire Research 100" session.

4.11 Goal Set

Context: Many researchers think that there are already too many academic societies. They think that we do not need a new society.

Problem: **Many researchers simply think that a new society just increases tasks for researchers.**

Forces: In many cases, researchers offer cooperation if the end time is clarified.

Solution: **Clarify the end time of new society.**
Why NicoNicoGakkai Beta limits the activity to five years:
1. Our goal is to establish the methodology of activities.
2. We can concentrate powers from our collaborators. By separating the period to five years, all collaborators recognize when the project will be finished. As a result, they focus their efforts to this five-year period.
3. We can accelerate our project. Similarly, since we focus on various trials in these five years, it is possible to thicken the density of activities.

Result: Many researchers support our activities and have given cooperation.

Known Uses: For example, the RubyKaigi, a conference of the Ruby programming language, stopped after it ran for six years. They took a rest for one year. After that, they reopened the conference again.

5. RESULTS

NicoNicoGakkai Beta has now been successfully established as a new academic society that advances the concept of "user participatory research". The purpose of this society is to create a place for discussion and sharing of UGC, technologies and research results. The first symposium was held in December 2011, and the number of people who watched the live program of that symposium was over 110,000. There were 25 presentations in the public session

titled "Research Trial Madness". Some of these were presented by non-professional researchers and we can see many examples of amazing research (for example, a large robot that humans can ride and control).

6. CONCLUSIONS

The initial results of this academic society are thus very encouraging, and we will continue related activities that encourage user participatory research in the future. We believe that NicoNicoGakkai Beta will additionally contribute to educate and inspire children in the opportunities and benefits of research, if these activities are continued. We hope that this project evolves into an international society that can help to connect the advances in Japan with those in other countries.

Acknowledgments

7. REFERENCES

[1] C. Alexander. *The Timeless Way of Building*. Oxford University Press, 1979.
[2] C. Alexander, S. Ishikawa, M. Silverstein, M. Jacobson, I. Fiksdahl-King, and S. Angel. *A Pattern Language — Towns, Buildings, Construction*. Oxford University Press, 1977.
[3] K. Eto. *Patterns Wiki XP — The Timeless way of Creation*. GijutsuHyoronsha, 2009.
[4] S. Hamano. *Ecosystem of Architecture — How Information Environment has been designed*. NTT Publishing, 2008.
[5] A. Irwin. *Citizen science: A study of people, expertise and sustainable development*. Psychology Press, 1995.
[6] J. Lave and E. Wenger. *Situated Learning: Legitimate Peripheral Participation*. Cambridge University Press, 1991.
[7] L. Lessig. *Code: And Other Laws of Cyberspace*. Basic Books, 1999.
[8] H. Masahiro and T. Hideaki. Social Networks of an Emergent Massively Collaborative Creation Community - Case Study of Hatune Miku Movie on Nico Nico Douga. In A. Passant and S. Fernandez, editors, *Proceedings of the Second Social Data on the Web workshop (SDoW2009)*, Washington DC (USA), 2009.
[9] H. Masahiro, T. Hideaki, and N. Takuichi. Network Analysis of an Emergent Massively Collaborative Creation on Video Sharing Website: Case Study of Creation Community of Hatsume Miku Movie on Nico Nico Douga. *Transactions of the Japanese Society for Artificial Intelligence*, 25(1):157–167, 2010.
[10] M. A. Nielsen. Reinventing Discovery: The New Era of Networked Science. 2011.
[11] B. Shneiderman. Copernican challenges face those who suggest that collaboration, not computation are the driving energy for socio-technical systems that characterize web 2.0. *Science*, 319:1349–1350, 2008.