Approach for the next generation digital contents research promotion

Koichi Sunada, Ph.D. Chairman of the Advisory Committee on Next Generation Digital Content as Professor and Science Producer KYUSYU University Faculty of Design.(ADCDU)

Masaki Koito. Director of Industrial related to Ministry of Economy, Trade and Industry commercial affairs information policy bureau cultural information.

Koki Uchimaru. Professor and Vice Director, center of Niche of Tohoku University.

1. OUTLINE

The benefit of digital technology cannot be disregard from our daily life. On condition of developing from the science technology side in 10 or 20 years, with regard to which approach and process to select after investigating next generation's digital content, the viewpoint of the investigation that the author made is introduced here. For promoting the digital content industry and searching the indispensable new researching field, the viewpoints that the guests, who were invited to the committee, conducted the hypothesis is particularly introduced as follows.

1. The possibility of approaching science technology from art
2. The blending property among human science, sensitivity, entertainment, cognitive science.

It is concretely attempted from recording settling on a plan, which themes are "instituting a new research field" and "the bringing up of top personnel in blending field ", "systematized expansion of social contact (barrier-free lab on natural science or human science)"

1.1. Summary

Japan has solid physical foundation, which public penetration of communication system as advanced network infrastructure is high. It is frontier in the world and can be showed as "digital culture". The software that is used into hardware with high-fashion design, media art and multimedia-technology and the digital content including game, creates the frontier mode of digital culture on the world stage. But the software to create content with is almost made in overseas.

The specialized manufacture group for application was formed in the sense of creative environment. So it is not correct to say that Japanese digital content is leading international market.

It is also indicated that in recent years the growth of digital content market is slow down.

It is dangerous to make conclusion only from this fact that it should be quick to approach something to the field from both outside and inside. But it is worth to be treated as an indicator for charging the future growth in current system.

As mentioned above, when considering the present state of Japan in, in order to keep the competitive position in international markets, the establishment should be examined in policy as quickly as possible to have the next generation research active. This article explores the new social foundation for the research according investigating how to promote the digital content research.
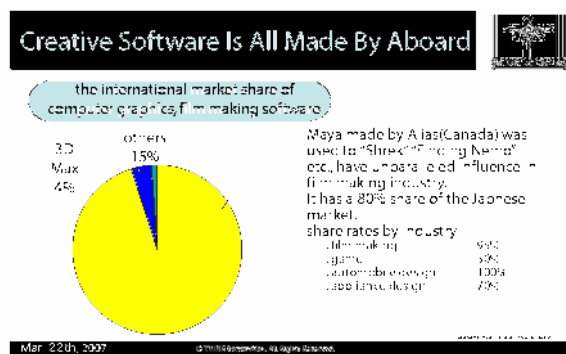
(Fig-1 the international market share of computer graphics)
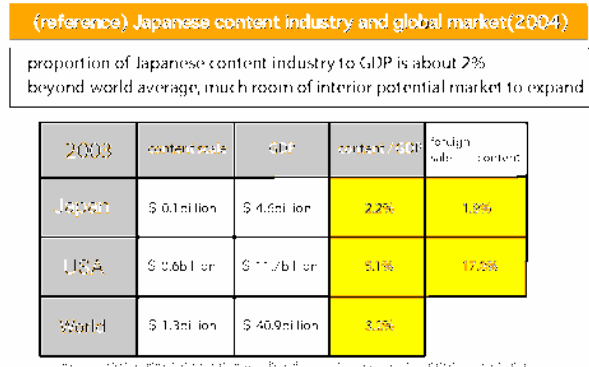
（Fig-2 the international market scale comparing and forecast）

2. METHOD OF RESEARCH APPROACH

The research method of digital content should be considered from 2 approaches. They are art to science technology and science technology to art.

3. Research target: Benchmark

3.1. Preceding evidence

The science technology has been supporting economic value and society value. In current society, the culture value also needs science technology's support.

3.1.1. Exploration and expansion of new research field

The 4 viewpoints are introduced as following.

1) The science technology to get human's creativity and sensitivity into shape

2) The science and applied technology to make human's sensitivity and 5 feelings clear

3) Content research of Japanese origin

4) Basis and common technology

3.1.2. Emergent innovation from art and science

3 samples of this viewpoint are showed as following.

. H-STAR project of Stanford University (interdisciplinary)

. IMSC of University of Southern California (on specialized field)

. The research of blending traditional culture with advanced technology in Kyoto Institute of Technology

3.1.3. Participative and communicative type meeting place for personnel and topics from different field

2 samples of this viewpoint are showed as following.

. Community site for media art, designer and creator, such as mixi and other Blogs

. Kyoto venture enterprise connoisseur committee

3.1.4. Fostering and education of personnel

3.1.5. Increased use of research result in industries

3.1.6. Introducing new evaluation system

3.1.7. Collaborating with Asia and aboard

3.2. Introduction of the case in USA

3.2.1. Serious video game effect

The data of what kind of lesson the master students of ADCDU of Kyushu University Design faculty want, superimposed onto the paper about serious game from USC. (Fig – 5)

It is possible to get higher effect in education through multimedia.

Fig-5 comparison of the effect of normal education with multimedia education

3.2.2 Consideration from the gist of "sensitivity value image initiative"

According METI, there are many triggers behind excellent digital content. Sensitivity must be in it as one of fundamental triggers.

3.2.3.support

The Field Covered By Technology Which Supports "Expression, Emotion, Empathy"			
	technology for expression	technology for emotion	technology for empathy
content field	■ original Japanese content ■ personal content ■ hybrid content (combination of REAL and VIRTUAL)		
infrastructure & media (evironment)field	■ the social media basis in which "expression, emotion and empathy" can be shared ■ personal media & infrastructure building ■ hybrid content (combination of REAL and VIRTUAL)		
human field	■ technology for making five senses (especially touch, taste and smell) clear ■ technology for making human's emotion clear		
common / basic technology	■ advanced display technology, sensor technology, new material, energy saving technology		

(Fig-4 the field supporting expression, emotion and empathy)

4. CONCLUSION

It is highly possible to create excellent content work for people from different area to collaboration with each other. A lot of companies have already collected personnel from the different interdisciplinary fields, and formed R&D department. But the case of success is few in Japan. Each department stores knowledge up vertically as a silo. To truly realize it, not only supplement each other simply, but also collaborating art and science using the multimedia is required. For example, setting up the device "research plant institute " to a new place, will make it possible, such as making own research valuable inescapably and new discover from different area.

To enhance the culture and art value, the question about fostering the researcher who can specialize the blending area and the profession on management and finance.

Here is the model of the process and viewpoint, which were benchmarked in this article, named "plant research institute"
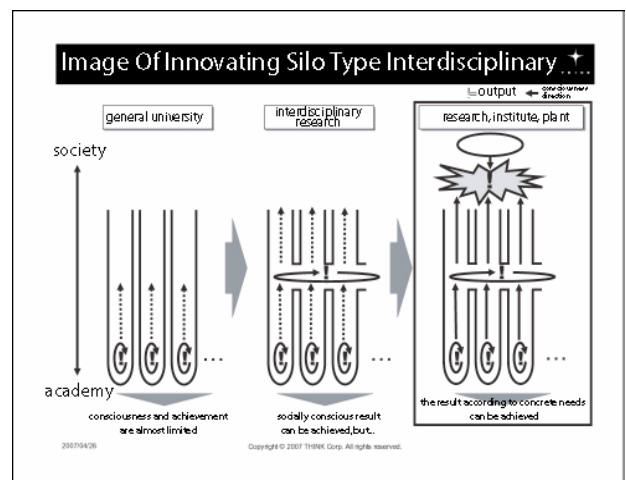
(Fig-5 "research, institute, plant" model concept)

In order to realize it, the following 1 and 2 are necessary. 1.Establishing the chance to have the benefit of coming out from the silo actively and the benefit of touching society known. It should be realized in education level. 2. Supplying the practical environment (research, plant, institute) for industry-academic collaboration. In current education site, interactive project form using multimedia should be brought in, because it is more effective for students to participate than text-base lesson.

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REFERENCES

(1) Wee Ling Wong (et al.). Serious Video Game Effectiveness. University of Southern California.

(2) H* – Human Sciences and Technologies Advanced Research. H-STAR Institute Stanford University.

(3)(4)(5)(6)Ministry of economy, Trade and Industry of "sensitivity value image initiative" gist and footnote

Serious game: video game that can be used by society