General Comments

a) NII seems to have a diverse set of research topics and areas. Basically, each research professor is allowed academic freedom to pursue a curiosity driven research topic. It is reasonable that NII has set up research centers and grand challenge projects to translate its research into industrial applications.

b) There is no conflict between academic freedom and the institute's overall strategy. But these aims should be well balanced. It is important to make a strategic plan involving everyone at the institute, followed by an inclusive selection of priorities. All activities have a term, and their progress is reviewed constantly. Small institutes cannot work on everything; they need to be dynamic in their pursuit of new research opportunities.

c) A better balance should be struck between "curiosity driven" research and research reflecting society's priorities. NII is a nationally funded institution, but it should also seek support from industry and other groups. Without such support it might face budget pressures due to changing government priorities. One way to accomplish this would be to expand the advisory board by including venture capitalists, heads of non-profit organizations, etc., in addition to members of academia.

d) A more application-sensitive research culture usually results in researchers becoming sensitive to emerging applications and doing more cutting-edge research. This is a slow process but it has to start some time.

Involvement with Industry

a) If more involvement is a concern to NII, it would be recommended to set up a small group whose role is to help advise researchers on 1) how to seek patents and how to protect inventions, 2) how to raise funds for possible studies and get seed funding, 3) how to set up small companies or spin-offs, and 4), if desired, how to transfer the fruits of their research to industry

b) Another possibility to increase the relevance of NII's activities to industry is a joint masters-level program in software-engineering.

c) Research projects do find good commercial applications as a result of collaboration with industry.

d) There are many success cases of companies collaborating with academia.

Collaborations of this sort would be beneficial from a research perspective for both professors and students. In line with this idea, there should not be a big gap between research and spin offs.

e) Regarding spin offs and start ups, we should realize that people who create are often not professors. Our role should be to support creative people by reducing their risks and increasing their chances of success.

f) In order to attract support from government and industry, I suggest developing more direct ties to industry and facilitating commercialization of promising ideas.

Possible research areas/topics of importance

a) Internet of things based on M2M communication (e.g. Smart Factory).

b) "Internet of services" based on automatic service discovery, service composition

c) Mobile computing might play a key role in the network infrastructure.

d) Contextual delivery of data is also an important role.

e) Next-generation social networks for monitoring agriculture and disease outbreaks might be very useful in developing countries and might be an opportunity for Japan to expand its presence around the globe.

f) On the technical side, emerging technical areas, like real-time search must be addressed. We must pay attention to areas that are relevant to many emerging applications in Japan.

Comments on Poster Presentations

a) NII has excellent young researchers and many excellent research projects.

b) It is very satisfying to see that its researchers get published in top journals and appear at premier conferences.

c) There is a good balance between the theoretical research and the practical application.

d) Each project has a novel aspect, but each needs to be very clear and precise about its assumptions and applicability. The projects should be assessed in light of other approaches besides those envisioned by the principal researchers.

e) One suggestion is to make more connections between projects. Doing so may lead to the projects progressing faster.

f) Domestic and international research collaborations should be encouraged, and more collaboration with industry is needed.

g) There should be more multi-disciplinary research collaborations.

h) On the subject of collaborating with countries in the Asia-Pacific region, we should be aware that many countries are looking for informatics solutions. There are three areas of special focus:

- Energy consumption and network infrastructure
- Many countries will need tools for management and awareness of CO2 emissions. 3D simulations are good educational tools for business.
- Many research programs at NII can be used to improve the economic value of informatics; e.g., Asian countries can benefit from know-how in informatics to promote education and tourism.