

Report of e-ASIA Science Talk Workshop in the field of “Advanced Interdisciplinary Research towards Innovation”

1. Significance of research in this field

Each country is facing several common social issues, such as traffic congestion, outbreak of infectious diseases or aged population. As social infrastructure is a system to enabling movements and interactions of people, things, money and information and plays a central role in our society, making it "Smart" is essential to solve variety of social issues and improve peoples' lives. Social infrastructure includes various elemental technologies, systematic integration of these technologies, and social application. Therefore, interdisciplinary research combining various research fields, such as basic material science, information communication technology, engineering, business economics and social science, is particularly important to make the social infrastructure "Smarter" to solve problems and to achieve innovation.

2. Identified collaborative activities in this field

"Intelligent Infrastructure" is a key area to be promoted in this field. An example of research activity is as follows;

Researchers from e-ASIA JRP member countries can collaborate by exchanging information about social needs, political priorities and current situations in every country, discussing and delineating future visions about desirable society, and identifying social issues to be solved for each country. According to the identified issues, researchers will make models of social infrastructure. Through simulations using these models, they can identify which component has the largest effect to make the whole situation better and which indices should be monitored. The result of this collaborative activity will be beneficial to have a clear vision for the next step to be taken and will be reported to the government, funding agencies or other authorities in each country for their R&D strategies and policies in future.

3. Effectiveness of international collaboration and expected synergistic effects

Although each country has several common social issues, they are in different developmental stages in terms of physical infrastructure conditions, spread of information and communication devices (such as smart phones) and affordable budget. This diversity increases chance to obtain variety of examples and data to improve accuracy, reliability and generality of models and simulation used in the Intelligent Infrastructure research. In general, developing countries can offer experimental fields with different conditions and social needs, which are beneficial for improvement and verification of models. Experiences and technologies of developed countries will be helpful to depict whole picture of desirable society that would lead to identification of solutions for problem in developing countries. International collaboration will contribute to attain more rapid and sustainable growth of the East Asian region through combination of different brains.

Participants to the “Science Talk on Advanced Interdisciplinary Research towards Innovation” are listed as follows.

Japan

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