THE MEMORANDUM OF UNDERSTANDING FOR IMPLEMENTATION OF JOINT FUNDING TO JST-XXX-YYY MULTILATERAL JOINT RESEARCH IN THE e-ASIA JOINT RESEARCH PROGRAM

(Tentative Draft as of 30 Jan, 2012)

In accordance with the Letters of Intent (hereinafter referred to as "Lols") deposited by from Members of the East Asia Innovation Area Joint Research Program (hereinafter referred to as the "Program"), Japan Science and Technology Agency (hereinafter referred to as "JST"), XXXX (hereinafter referred to as "XXX") and YYYY (hereinafter referred to as "YYY"), hereinafter singularly referred to as a "Party" and plurally as the "Parties", agreed to apply this Memorandum of Understanding among the Parties to implement the pilot joint call for funding (hereinafter referred to as the "Joint Call") in order to support collaborative research projects in the field of AAAA.

I. General Description

I-1. New Scheme for Joint Funding of JST-XXX-YYY Research Collaboration

Referring to the Lols, the Parties have agreed to establish a new scheme for joint funding of multilateral cooperative research projects. After consultations among the Parties, AAAA has been selected as the field of research for which the joint funding scheme will be applied to.

I-2. Aim of Joint Call and Research Field

The aim of the Joint Call is to strengthen the multilateral collaboration in the field of AAAA to pursue the state-of-the-art technologies, as well as solutions to common issues to realize innovative and robust economy and society in the East Asia. Examples of research topics within AAAA are:

- 1. aaaa
- 2. bbbb
- 3. cccc
- 4. dddd
- 5. eeee

The current plan is to issue the first announcement of the Joint Call for proposals in 2012. Each selected project will be funded for a period of three years.

I-3. Invitation of Calls and Prospective Applicants

The Parties shall invite researchers from their countries to submit joint proposals for cooperative research projects in the research field of AAAA. Research topics described above are welcomed but topics shall not be limited to them. All applicants must fulfill national eligibility rules for research grant application. Researchers from the industry may participate in the joint collaboration.

I-4. Financial Support

The Parties plan to support cooperative research projects including sending and inviting researchers to the counterpart countries.

JST supports expenses for Japanese researchers; XXX supports expenses for XXX's researchers and YYY supports expenses for YYY's researches. Research fund should not in principle cross borders.

I-5. Intellectual Property Rights

If a researcher has independently created an intellectual property as the research result, the country to which such a researcher belongs can independently own the intellectual property with prior consents of the other countries. In this case, the expenses required for the application procedure, etc., and the maintenance of the right shall be borne by the country which owns the relevant intellectual property.

If researchers in different countries have jointly created an intellectual property as the result of joint research, the ownership of such intellectual property shall be shared by respective countries in accordance with the contribution exercised by each researcher¹. The expenses required for the application procedure, etc., and the maintenance of right shall also be shared by the respective countries, accordingly.

II. Support by JST/XXX/YYY

II-1. Budget for a Cooperative Research Project

Due to possible changes in budget situation, amounts for support will be adjusted each year.

<u>II-1.1 JST</u>

Despite expenditure of a project may differ in each year, depending on the content of activities, the total budget for the Japanese researcher over a full 3-year period (i.e., 36 months) should not exceed 15 Million Japanese Yen in principle. In case there will be clear scientific impact or merit which justifies the budget, applicants may request the total budget up to 30 Million Japanese Yen.

<u>II-1.2 XXX</u>

Despite expenditure of a project may differ in each year, depending on the content of activities, the total budget for the XXX's researcher over a full 3-year period (i.e., 36 months) should not exceed () United State Dollars in principle.

¹ JST would suggest that "IP shall be shared in accordance with the contribution exercised by each researcher" as this concept is a today's world standard. However, if all other countries feel comfortable that "IP shared in accordance with the research budget born by the Parties", it will be fine with us.

<u>II-1.3 YYY</u>

Despite expenditure of a project may differ in each year, depending on the content of activities, the total budget for the YYY's researcher over a full 3-year period (i.e., 36 months) should not exceed () United State Dollars in principle.

II-2. Cooperative Research Period

The cooperative research period shall be 3-years (i.e., 36 months) in total, beginning from the start date.

II-3. Details of Support

The Joint Call is designed to support additional expenses related to collaboration among Japanese, XXX's and YYY's researchers. A precondition for applying to this Joint Call is that the main research infrastructure is already ensured by each research group.

II-3.1 Contract between Applicant and JST

Support will be implemented according to a contract for commissioned research entered between JST and a university or a research institute, etc. (hereinafter referred to as the "Institution").

The contract for commissioned research will be renewed each year over the cooperative research period.

Since the contract is concluded on condition that all administrative procedures related to the project shall be handled within the Institution, the Principal Investigator (hereinafter referred to as "PI") should consult with the department in charge at his/her Institution.

As for the contract between the Japanese institution and JST, it stipulates the Article 19 of the Industrial Technology Enhancement ACT (Japanese version of the Bayh-Dole Act) and the Article 25 of the ACT on Protection of the Creation, Protection and Exploitation of Content (tentative translation) shall be applied to all intellectual property rights (patents, utility model or design rights, rights to programs, databases and other intangible property and know-how, and so on) generated as a result of this project, and that these can be the properties of the Institution with which the PI is affiliated.

<u>II-3.2 Contract between Applicant and XXX</u> The contract between XXX's Institution and XXX will ------.

<u>II-3.3 Contract between Applicant and YYY</u> The contract between YYY's Institution and YYY will ------.

II-3.4 Contract among Researchers

If a contract for cooperative research is necessary for implementing actual research collaboration, such a contract should be concluded among the Japanese, XXX's and YYY's

Institutions. <u>It is strongly advised</u>, though not required, that appropriate discussions of the issues regarding treatments of research information brought by researchers involved for the implementation of research collaboration, of research achievements as a result of research collaboration and of intellectual properties with among the concerned parties take place, in order to ensure good collaboration. If an agreement is concluded, it should be reported to the Parties.

II-3.5 Coverage of Funding

Funding provided within this call is intended to enhance the capacity of the applicants to collaborate. Funding will therefore be provided mainly in support of the transportation for collaboration and of the local research endeavors that is necessary for the collaboration. Funding will cover following expenditures for up to three years.

- Stipend or salary for a PhD student, salary for a post-doctoral fellow (i.e. a temporary position for up to 3 years, financed according to national gross wages). In countries where national rules allow it, the salary of the young researcher may be included.
- Consumables
- Small equipments
- Travel costs
- User charges for facilities

All expenditure items must conform to the national rules relevant for each applicant.

III. Application

A common application including researchers from at least three countries shall be submitted to each of the Parties in parallel. The application shall be written in English. For the Japanese applicants, project titles, summary of the project and budget plan for the project shall be submitted also in Japanese.

The application shall include:

- a) Project description including how collaboration will be carried out, with clear statements of what roles Japanese, XXX's and YYY's researchers will play respectively in the project;
- b) Description on the expected outcome of the proposed project, scientifically as well as in terms of its relevance for the industry and society;
- c) Description on the ongoing activities and specific advantages of the each group respectively, which form the basis for the proposed joint project;
- d) Description on the expected added value from the proposed joint project, including how the competence, technology and other resources in each group complement each other;
- e) Description of how the project is expected to help strengthen research multilateral collaboration over the longer term;
- f) Description on the added value expected from the multidisciplinary approach in the proposed joint project; and

g) Description on how the proposed joint project interacts to or impacts on other comparable activities worldwide.

III -1. Application Forms

For Japanese researchers applying to JST, the following application forms shall be prepared in English ("E") and partially in Japanese when indicated as "J".

Form 1 J/E	Application outline (title of cooperative research project, names of PIs, cooperative research period)
Form 2 J/E	Summary of the Project
Form 3 E	Information on PIs (their CVs)
Form 4 E	Name lists of individuals committed to the cooperative research project in Japan, XXX and YYY
Form 5 E	Description of the cooperative research project including the points stated above
Form 6 E	Research Networking Plan for the cooperative project
Form 7 E	Papers and other publications by the Japanese-side PI in the past 5 years
Form 8 E	Papers and other publications by the XXX-side PI in the past 5 years
Form 9 E	Papers and other publications by the YYY-side PI in the past 5 years
Form 10 J/E	Budget plan for the project

For the XXX's researcher applying to XXX, the following application forms ------.

For the YYY's researcher applying to YYY, the following application forms ------.

III-2. Preparation of Application Forms

Applicants should fill in the particulars in all the application forms listed in above III-1.

III-3. Submittal of Application Forms

Applicants should send their application forms by XX XXXX, 20XX.

Japanese applicants shall send their application forms by Online Application System (http://www.e-rad.go.jp/index.html).

XXX's applicants shall send their application forms ------.

YYY's applicants shall send their application forms ------.

IV. Evaluation of Project Proposals

IV-1. Evaluation Procedure

Review Panel on AAAA of the Joint Call consisting of one expert from each of the Parties countries, respectively, will evaluate all proposals. Based on the results of the evaluation,

the Board Meeting of the Program will make a common decision regarding funding of selected proposals.

IV-2. Evaluation Criteria

The following general evaluation criteria will apply to each proposed project:

1) Conformity with Aims of the Joint Call and Research Field

The proposed activity shall conform to the aims and the research field of the Joint Call. In addition, the applicants shall have the enough research infrastructures to pursue the proposed activity.

2) Capability of Research Leaders and Current Research Activities

The PIs in each country shall have the vision and the experiences (or the potential in case of younger researchers) to reach the project goals during the period of support.

3) Effectiveness and Synergy of the Joint Research Activity

The proposed research activity shall be advanced, novel and internationally highly evaluated. The activity shall have a significant impact on the science and technology development or shall contribute to solve the internationally common issues. The activity shall create the innovative technological seeds to trigger the new industrial needs in the future.

The activity to produce the synergy effects from the collaboration is especially desirable. For example, the activity which can acquire the knowledge, skill and application form the counterparts, the activity which can utilize the special resources and the geographical features of the counterparts, and so on.

4) Validity of Research Plan

The research activity and the expenses for it, including the sharing of research activity with the counterpart research institutes, shall be appropriately planned.

5) Effectiveness and Continuity of Exchange

The proposal shall contain activities to enhance sustainable research exchange. The followings are examples.

- (a) Nurturing of the young researchers through the research activity.
- (b) Sustainable development of the research exchanges initiated by this activity.
- (c) Expanding the international research networks among the researchers including the researchers other than the PIs and members of this activity.
- 6) Validity of Exchange Plan

The research exchange activity and the expenses for it shall be appropriately planned.

IV-3. Announcement of Decision

The final decision regarding awarded projects will be notified from the Parties to the

applicants around June 2012.

V. Responsibilities of PIs After Proposals are Approved

After the proposal has been approved, PIs and their affiliated institutions shall observe the followings when carrying out the cooperative research and utilizing supported funds.

V-1. Annual Progress Report

V-1.1 Annual Progress Report to the Area Advisor

At the end of each fiscal year, the PIs shall promptly develop and submit an integrated progress report to the Area Advisor (the Chair of Review Panel) on the status of joint research.

V-1.2 Annual Progress Report to JST

At the end of each fiscal year, the Japanese PI shall promptly submit a progress report on the status of research exchange, and the institution with which the PI is affiliated shall promptly submit a financial report on supported expenses.

V-1.3 Annual Progress Report to XXX

At the end of each fiscal year, the XXX's PI shall ------.

V-1.4 Annual Progress Report to YYY

At the end of each fiscal year, the YYY's PI shall ------.

V-2. Final Report

V-2.1 Final Report to the Area Advisor

After completion of the period of joint research, the PIs shall jointly develop and submit an integrated final report to the Area Advisor on the results of joint research within one month.

V-2.2 Final Report to JST

After completion of the period of joint research, the Japanese PI shall submit a final report on the results of joint research within one month. The final report shall include a general summary (maximum five A4 pages) compiled jointly by all of the Japanese research groups. If papers describing results of research exchange are presented to academic journals, societies and so on, which is expected by the Parties, please attach copies of such papers separately to the final report.

The institution with which the PI is affiliated shall submit a financial report on supported expenses within the same time frame.

V-2.3 Final Report to XXX

After completion of the period of joint research, the XXX's PI shall ------.

V-2.4 Final Report to YYY

After completion of the period of joint research, the YYY's PI shall ------.

Japanese applicants should contact the following for further information:



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XXX's applicants should contact the following for further information:

YYY's applicants should contact the following for further information:

Signed in three original copies in the English language, all texts being equally authentic.

Date XX XXXXX, 20XX On behalf of Japan Science and Technology Agency

Dr. Michiharu Nakamura President Japan Science and Technology Agency

Date XX XXXXX, 20XX On behalf of XXX

XXXXX XXXXX XXXXX

Date XX XXXXX, 20XX On behalf of YYY

YYYYY YYYYY YYYYY