Appendix 4.2

PJ2202 IVO Project - Agricultural IOT based on Edge Computing
The final event on "Academic and Technical Workshop for Green Farm"

Report/Minutes Form

I. Organizer:

Name:	Dr. Hoang Trong Minh
Position:	Project Leader
Institution:	Posts and Telecommunciations Institute of Technology

II. Program:
- Date: 26 February 2025 to 2 March 2025
- Venue: Marigold Hotel– No.83, Bui Thi xuan, District 2, Da Lat, Lam Dong Province, Vietnam

Program Agenda:

Time	Content
26 Feb 2025	
	Arrival at Hotel
27 Feb 2025	
9:00 – 10:00	Travel to Dalat farm
10:00 – 13:00	Observe the deployment and practical application of IoT systems in agriculture.
13:00 – 14:30	Lunch
14:30 – 16:00	Meeting with stakeholders (Mimosatech). Mimosatek Company introduces the IoT system (like in the project) and the possibility of implementing the project results as well as the necessary coordination solution in the future.
16:00 – 17:00	Travel to Hotel
28 Feb 2025	
09:00 – 09:45	*Summary of theoretical and practical challenges related to the project.* Dr. Hoang Trong Minh, Project Leader, PTIT, Vietnam
09:45 – 10:30	*Combining microclimate data system and LED lighting in greenhouse tomato cultivation.* Dr. Le-Khanh Nguyen, UET-VNU, Vietnam.
10:30 – 11:00	Tea break
11:00 – 11h45	*Real-Time Deep Learning Solutions for UAV-Assisted Plant Health Monitoring in Rock Melon Farming.* Dr. Norulhusna Ahmad, UTM, Malaysia.

12:00 – 14:00	Lunch
14h00 – 14h45	*Building a visual-inertial positioning system for drones to collect crop data in precision agriculture.* Dr. Minh-Trien Pham, UET-VNU. Vietnam.
14h45 – 15h30	*Empowering IoT with Privacy-Enhancing Technologies: Innovations, Impacts & Future Directions.* Dr. Kalika, NECTEC, Thailand.
15:30 – 16:00	Teabreak
16h00 – 16h45	*Smart Fertigation IoT Innovations for Rock Melon Farming.* Dr. Hazilah Mad Kaidi, UTM, Malaysia.
01 Mar 2025	
09h00 – 13h00	Discussion on the academic and practical implications of the research outcomes.
13h00 – 14h30	Lunch
14h30 – 17h00	Detailed plan for the project's closing.
02 Mar 2025	

III. Participant List:

participants from Project Team:

No.	Name	Organization	Itinerary
1.	Dr. Hoang Trong Minh	Posts and Telecommunications Institute of Technology, Vietnam	26 Feb 2025 – 2 Mar 2025
2.	Dr. Pham Anh Thu	Posts and Telecommunications Institute of Technology, Vietnam	26 Feb 2025 – 2 Mar 2025
3.	MSc. Nguyen Thanh Tra	Posts and Telecommunications Institute of Technology, Vietnam	26 Feb 2025 – 2 Mar 2025
4.	Dr. Pham Minh Trien	VNU_University of Engineering and Technology Vietnam, Vietnam	26 Feb 2025 – 2 Mar 2025
5.	Dr. Nguyen Le Khanh	VNU_University of Engineering and Technology Vietnam, Vietnam	26 Feb 2025 – 2 Mar 2025
6.	Dr. Norulhusna Ahmad	Universiti Teknologi Malaysia	26 Feb 2025 – 2 Mar 2025
7.	Dr. Hazilah Mad Kaidi	Universiti Teknologi Malaysia	26 Feb 2025 – 2 Mar 2025
8.	Ms. Siti Nur Aisyah Mohd Robi	Universiti Teknologi Malaysia	26 Feb 2025 – 2 Mar 2025
9.	Dr. Kalika Suksomboon	National Electronics and Computer Technology Center, Thailand	26 Feb 2025 – 2 Mar 2025

Other participants:
  (1) Mr. Nguyen Minh Tri, CEO Mimosatech
  (2) Staff of Mimosatech
  (3) Staff of Hanh Huong Farm, Lam Dong Province

IV. Summary of the activities corresponding to the objectives

1. *Briefly describe the objectives of the event.*
   - Sharing academic research conducted by participants in relation to the project's tasks. Escpecially task 3.
   - Evaluating completed work, exploring future directions for research collaboration.
   - Conducting a field visit to Da Lat to observe and assess a real agricultural IoT system and exchanging experiences with stakeholders. This visit is particularly relevant because the IoT system implemented in our project was supplied by Mimosatech, a leading technology provider based in Lam Dong. Moreover, Da Lat, situated in Lam Dong province, is also known for its smart agriculture with numerous farms employing IoT solutions. The project's dataset was collected from a farm in Da Lat, offering valuable context for understanding its practical implementation.
   - Additionally, the meeting included a detailed plan for the project's closing.

2. *Describe the activities corresponding to the objectives.*
   - The field visit included an in-depth observation of the deployment and practical application of IoT systems in smart agriculture. Participants had the opportunity to witness real-time data collection, control mechanisms, and predictive analytics used for farming.
   - The visit to a tomato farm featured hands-on experiences with IoT devices, demonstrating their operation and effectiveness within the project's framework. Participants, including researchers and farmers, exchanged insights on agricultural practices in Malaysia and Vietnam, comparing data collection methods, control techniques, and forecasting models.
   - Direct discussions were held with the farm owner to understand practical differences and unique challenges faced in smart farming. This engagement provided valuable perspectives on IoT implementation and agricultural adaptation in different regions.
   - All shared insights and experiences were aligned with the project's scope and proved to be highly beneficial for further research and application.

3. *Describe, in detail, if there are changes in the work plan, project schedule, budget allocation, etc. from the initial proposal.*
   - The event venue was relocated to a nearby location due to logistical considerations. This adjustment did not require additional budget, as expenses for both meeting arrangements and accommodations remained within the original allocation.
   - Two NECTEC project members were unable to attend as initially planned, resulting in only other representative participating on their behalf. With short notice for booking alternative and due to limited seat availability incurred higher travel costs. Additionally, members from NICT and other PTIT members

were unable to attend due to financial constraints from their institutions.

- Despite these unforeseen changes, the event proceeded smoothly and achieved practical, and fruitful outcomes. The results were fully aligned with the objectives set and approved beforehand, ensuring the overall success of the event.

V. Others

The presentation slides attached.

Here are some pictures at the event: