

**CAPSTONE PROJECT REPORT**

**Report 1 – Project Introduction**

– Ho Chi Minh, September 2023 –

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# I. Record of Changes

| **Date** | **A\* M, D** | **In charge** | **Change Description** |
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\*A - Added M - Modified D - Deleted

# II. Project Introduction

## 1. Overview

### 1.1 Project Information

* Project name: Science Research Activity Support System
* Project code: SU23SE08
* Group name: GSU23SE08
* Software type: Web App

### 1.2 Project Team

| **Full Name** | **Role** | **Email** | **Mobile** |
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**2. Introduction**

The Science Research Activity Support System (SRASS) was designed to meet the specific requirements of the FPT University, Ho Chi Minh Campus's Library and Research Department. Its primary purpose is to simplify the process of managing scientific conferences, with the initial deployment taking place at the HCM Campus. The basic idea behind this project is to establish a system to support conference management activities and coordinate activities of conference attendees: PC chairs, authors, and reviewers, from the initial phase when the individual accountable for managing a conference receives the approved conference plan up to the end of the conference.

***3. Product Background***

For over two decades, FPT Education has been on a transformative journey, guided by a steadfast vision known as iGSM (Industry-Relevant - Global - Smart Education - Mega). This vision is firmly grounded in the aspiration to become an internationally recognized mega-education system that aligns with societal demands and harnesses state-of-the-art educational technologies. With a history marked by growth and innovation, FPT Education has established itself as a pioneer in the field of education.

At the heart of FPT Education, FPT University plays a pivotal role by organizing numerous annual academic initiatives to promote research and innovation. However, as scientific conferences evolve to enhance research and innovation, FPT University encounters challenges in optimizing the management process. Currently, this process encompasses the following sequential activities:

1. Input Conference Plan
2. Configure Conference Preferences
3. Initiate a Call for Research Papers
4. Appoint Paper Reviewers
5. Finalize Paper Decisions
6. Communicate Decision Results
7. Request for Camera Readies
8. Request Presentation Materials
9. Produce Reports

This is a sophisticated process. Furthermore, this process largely depends on the experience of the person responsible for managing these conferences to run smoothly. This would impose a restriction on the effectiveness of the standard procedures.

**4. Existing Systems**

**4.1 Analysis**

**4.1.1 EasyChair**

EasyChair is a conference management system that provides a comprehensive suite of services to organize conferences of any size and complexity. It is widely used in the scientific community for tasks such as organizing research paper submissions and reviews. EasyChair offers a range of features including managing program committees, publishing proceedings, registration, and more. It has been used since 2002 and is considered the world’s largest conference management system.

These are the main benefits EasyChair offers:

* User-friendly interface: EasyChair has a simple and intuitive interface that makes it easy for conference organizers and participants to use.
* Comprehensive feature set: The software offers a comprehensive set of features for managing conferences, including paper submission, review management, and scheduling.
* Customizable workflows: EasyChair allows conference organizers to customize workflows and configure the system to fit their specific needs.
* Integration with other tools: The software integrates with other tools such as plagiarism checkers and reference management software.
* Support for virtual conferences: EasyChair offers support for virtual conferences, which is increasingly important in the current climate of remote work and online events.

However, EasyChair also has some cons, most notably:

* Limited technical support: The software is generally user-friendly, but if issues arise, there is limited technical support available.
* Limited reporting options: Some users have reported that the reporting options in EasyChair are limited, which can make it difficult to track conference metrics.

**4.1.2 CMT**

The Conference Management Toolkit (CMT) is a conference management system for hosting academic conferences, sponsored by Microsoft Research.

These are the values CMT offers:

* Comprehensive feature set: CMT offers a comprehensive set of features for managing conferences, including paper submission, review management, scheduling, and registration management.
* Integration with Microsoft products: CMT integrates with Microsoft products such as Excel and Word, which makes it easy for users to work with the software if they are already familiar with Microsoft products.
* User-friendly interface: CMT has a simple and intuitive interface that makes it easy for conference organizers and participants to use.
* Robust reporting and analytics: CMT offers detailed reporting and analytics features, which make it easy for conference organizers to track metrics and analyze data.
* Flexible workflow options: CMT allows conference organizers to customize workflows and configure the system to fit their specific needs.

However, CMT also has some limitations, most notably:

* Limited technical support: While technical support is available, some users have reported that it can be slow or unresponsive.

**4.2 Conclusion**

From the applications that are analyzed above, combined with our research of the current conference management activity taking place at FPT University, HCM Campus, we can infer the following issues relating to the adoption of a standard procedure for managing a scientific conference:

* When using an available system, limited technical support may hinder the processing and coordinating activities within a conference.
* When researching how statistical reports need to be standardized to monitor conference activities, we realized that the data collection processes of these systems are rather limited and do not fulfill the requirements for a standard procedure to manage conferences.

**5. Business Opportunity**

Based on the conclusion from 4.2, we realize the chance for our SRAS system to construct a scientific conference managing system within FPT University, HCM Campus that satisfies the following requirements:

* Apply a standard procedure for managing scientific conferences
* Able to aggregate information and monitor activities during conferences

**6. Software Product Vision**

The SRAS system is expected to be a valuable tool for managing scientific conferences when deployed at FPT University, HCM Campus. In addition, the system will become a powerful platform for researching activities in FPT University, HCM Campus, and FPT University as a whole.

In the future, the system can be expanded and augmented following these directions:

* Standardize the scientific conference management and apply it to all FPT campuses or other universities
* Incorporate scientific database to turn the system into one system for research activities at universities

**7. Project Scope & Limitations**

**7.1 Major Features**

| Role | Feature code | Description |
| --- | --- | --- |
| Admin | FE-01 | Initialize a conference from its conference plan to ensure its authenticity |
| FE-02 | Create the website content for a conference |
| FE-03 | Download the final report of a conference |
| PC chair | FE-04 | Get the conference summary, including  overview information, program committee, participation information of submissions and reviewers |
| FE-05 | Adjust a conference's settings |
| FE-06 | Receive submissions |
| FE-07 | Coordinate reviews |
| FE-08 | Make decisions on papers |
| FE-09 | Communicate the result to authors |
| FE-10 | Request for camera ready submission |
| FE-11 | Request for presentation submission |
| FE-12 | Produce statistical summaries |
| Author | FE-13 | Submit a conference paper |
| FE-14 | Declare submission conflicts of interest |
| FE-15 | Track an author's submissions |
| FE-16 | Upload revision files for a submission if required |
| FE-17 | Upload a camera-ready version of a paper when it is requested by a PC chair |
| FE-18 | Upload presentation files for a conference paper |
| Reviewer | FE-19 | Specify their reviewing information (quotas, subject areas) when assuming the role of reviewer for participating tracks |
| FE-20 | Access the list of assigned papers |
| FE-21 | Enter their review for an assigned submission |
| FE-22 | Declare conflicts of interest between a reviewer and their assigned papers. |
| Research lecturer | FE-23 | Input research profile information |
| FE-24 | View the research profile |
| System handler | FE-25 | Update conference progress over time |
| FE-26 | Detect conflicts of interest between submissions and reviewers |

**7.2 Limitations & Exclusions**

**Limitations:**

| Limitations Code | Description |
| --- | --- |
| LI-01 | The system allows exporting the list of manuscripts expected to be in the conference proceeding manuscripts, but does not support any functionalities for compiling conference proceedings. |
| LI-02 | The system cannot extract the data about expertise from a researcher's profile to fill in reviewer's expertise field, which is later used to suggest reviewers for submission. |
| LI-03 | The system does not support any transaction channel other than Paypal. |
| LI-04 | The system does not include the feature to import publications based on DOI. |
| LI-05 | The system does not include the feature to send out mass invitations to reviewers by uploading a list of reviewers to be invited. |
| LI-06 | The system does not include the feature to add conference users to system by uploading the file of registered accounts. |
| LI-07 | The system does not have a mobile application accessible for authors and reviewers. |
| LI-08 | The system does not support changes on structure of activity timelines once the number of revisions is confirmed and submissions are received. |

Exclusions:

| Exclusions Code | Description |
| --- | --- |
| EX-01 | The system does not incorporate any plagiarism checker. |
| EX-02 | The system does not include reviewer bidding workflow. |
| EX-03 | The system does not support the discussion or sharing of reviews among reviewers during the review process. |
| EX-04 | The system does not support Human Resource Management activities. |
| EX-05 | The system does not support on-location event organization activities. |
| EX-06 | The system does not support accounting-related functions. |