# Introduction

## Purpose

The 10-week Industrial Orientation program undertaken by the student is a partial fulfillment of the requirements in pursuing the degree of Bachelor of Engineering (Computer Science) in Nanyang Technological University. This report is presented as a summary of the activities and observations gained through an internship with Singapore Advanced Research and Education Networks (SingAren).

In the first chapter, a brief history and description of the company will be explored and then followed by the objective and scope of the project.

## Company Profile

SingAren is a non-profit society developed as Singapore’s Research and Education Network (REN) to maintain connectivity among its member institutes in Singapore and RENs in other countries. The motivation behind SingAren’s operation is to promote R&D in next-generation internet technologies, facilitate cost-effective methods of adopting advanced Internet technologies and foster collaborations between local research institutes with the global community.

SingAren began as a government-funded project established in 1997 as an effort to connect Singapore’s research and education community to the international scene. It was financed by the then Telecom Authority of Singapore(TAS) and National Science and Technology Board(NSTB), the previous incarnations of the current Infocomm Development Authority(IDA) and Agency for Science, Technology and Research(A\*STAR) respectively. The international connection was launched on 7 Nov 1997 by the Assistant to the USA President for Science, John Gibbons and Singapore's Minister for Education and the Chairman of National IT Committee, RAdm Teo Chee Hean. On 1 October 2003, SingAren was registered as an official Society to widen its role of serving the user community. (1)

## Institution Partnerships

As the national REN, SingAren has preserved close working relationships with global Next-Generation Internet organizations such as Asia Pacific Advanced Network (APAN) and Trans-Eurasia Information Network (TEIN3). Currently, SingAren has formed partnerships with local universities such as NTU and NUS, polytechnics and government institutes like IDA in deploying the high-performance network connection and fostering innovative research in certain areas such as E-learning and cloud-based transfer services.

## Task

Throughout the internship period, the student was attached to the Eduroam data analytics project. The student was tasked with the responsibility of maintaining the Eduroam usage statistics program implemented by SingAren to monitor the operation of the Eduroam service and detect any server errors that may occur during the service period. The student would learn and apply the techniques utilized in the automation of the current log processing system. The student would also learn to apply the programming knowledge and software development concepts acquired in the academic course to process the log data from the Eduroam logging system and present the data in the form of graphs. The student was required to create a visualization tool using available web-based technologies for institution users to analyse the data easily and track down problems if needed. The student would collaborate with CITS personnel attached to SingAren in order to get the Eduroam data analysis system established on the Eduroam server, enabling members to view the statistics graphs through a web browser.

# Bibliography

1. **Singapore Advanced Research & Education Networks.** About Us- SingAren. *SingAren Web site.* [Online] July 31, 2014. [Cited: July 15, 2015.] http://www.singaren.net.sg/history.php.