UNIVERSITI TEKNOLOGI MARA

MULTI-AGENT IMPLEMENTATION FOR TELEKOM MALAYSIA BERHAD LEASED LINE REPORTING

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ABSTRACT

In telecommunication industry, the delivery period in provisioning product is very crucial because of competition. Every players put effort in ensuring their product is better than others in term of delivery period. But, to do that, it requires a lot of work because of complexities of the telecommunication infrastructure's setup. Among the work, one of them, which are important, is performance analysis through reporting mechanism. This paper discovers on this issue by focusing on the leased line product of Telekom Malaysia Berhad. Its current practice in analyzing the performance gives the idea in proposing the way which could improve the delivery performance. The existing of multiple systems in the provisioning process is the main reason which hinders the aim of having better analysis of the performance where the reporting activities could not be centralized effectively other than having lot of manual intervention. Because of impracticality in using traditional method of system development, the multi-agent concept in system development is proposed. The concept is chosen since through its specialization could give good solution for data retrieval, data presentation and the active reporting through alert and scheduled report mechanism. This good solution should be able to provide very effective reporting mechanism in improving the leased line delivery performance for Telekom Malaysia Berhad.

CHAPTER 1

INTRODUCTION

The requirement to improve the delivery period of the leased line provisioning process has required Telekom Malaysia Berhad (TM) to have good reporting mechanism. However, the effort is somehow hindered because of the provisioning process, which involves four different systems. This avoids of having a centralized reporting mechanism and if required, it would involve human intervention, which slow down the process and decrease the effectiveness.

This paper would try to solve this issue for having centralized and effective reporting by proposing the concept of multi-agent. The multi-agent solution has been widely used in order to solve some of the limitations on the traditional information system development approach. This includes the case where a few modules or systems need to be centralized because of certain reasons as for the case studied. If the centralization is possible, there should be no problem to proceed with traditional method, but if not, the multi-agent could give the solution that would be explained in this paper. Multi-agent has been used in various industries including the telecommunications industry. It does not stop there where with the use of multi- agents many other interesting features like personalization could be implemented in the proposed system. It is hoped to give big impact to the leased line implementation with the good agents' solution.