

## **Adopting SDLC in Actual Software Development Environment: A Sri Lankan IT Industry Experience**

**Munasinghe B. and Perera P.L.M.**

Department of Computing and Information Systems, Wayamba University of Sri Lanka

Email: b.munasinghe@gmail.com, punathlasanka@gmail.com

### **Abstract**

Systems Development Life Cycle (SDLC) and its variant forms have been around in systems development arena as a steadfast and reliable development approach since 1960s and are still widely used in software development process in information technology (IT) industry. IT industry has been adapting SDLC models as a solution to minimize issues aroused in a large number of failure projects. Though SDLC models powerfully model that software projects undergo some common phases during its development process, most software development organizations in the Sri Lankan IT industry today only use SDLC models as a token to show off their process quality but fail to adhere to them in real-time, thus failing to grasp the real benefits of SDLC approach. This study sought to find the causes behind the practical difficulties of a medium Sri Lankan IT Company to find a fitting SDLC model in their development process and the limitation to adhere to such model-based approach. The research instruments were questionnaires that were administered to a sample frame consisting of employees, experts and the managers. Interview schedules were also used.

The findings of the study indicate that the main cause behind difficulty in finding a fitting model as extreme customer involvement, which causes regular requirements changes. Company concentrates more on winning the customer than following proper requirements definition approaches suggested by SDLC to define clear-cut requirement specifications, which result in inefficient customer interference throughout the development process demanding inconvenient changes to be addressed down the line. Most of the software projects with version releases involve maintenance and bugs fixing while developing the next release. As customers become system users, their demands become more insisting, making maintenance process tedious and development of next phases more challenging. Lack of proper customer management approaches is strongly visible in all areas of development and customer demands cause poor resource management and increased stress on work force. Study findings suggests that the main reasons behind the limitations in companies to follow a proper SDLC approach are: limitations in budget and human resource, unrealistic deadlines, frequent requirements changes, vague project scope definitions, nature of the project (whether offshore or local), need of using new technologies yet lack of timely availability of knowledge expertise, project team diversity and company's own business model interfering the project dynamics. Future work will focus on further investigations incorporating number of Sri Lankan IT companies covering all ranges of business magnitudes.

**Keywords:** *Adopting SDLC, Sri Lankan IT Industry, Limitations of adopting SDLC approach*