LITERATURE REVIEW

Lang, M. (2011)

This Paper introduces Agile software development involves self-managing teams that are empowered and responsible for meeting project goals in whatever way they deem suitable. Management are required to place more trust in such teams than under a more traditional development methodology. This paper highlights how the use of agile practices can enhance trust amongst agile team members. It also presents challenges that agile teams may now face as a result of using agile practices, which are based on the findings from three case studies of agile software development teams.


In this paper Various agile software development methodologies, practices, and techniques have been proposed in the last decade, some present novel ideas, while many are simply made up of tasks and techniques borrowed from prominent agile methodologies. Each of these methodologies prescribes a set of practices and techniques which are deemed appropriate for application in a specific context. However, there exists no single method which fits all project situations. This has resulted in the advent of Situational Method Engineering (SME) approaches, which are used for developing software methodologies that are tailored to fit the specific circumstances of the project situation at hand. Since tool support has become an essential prerequisite for widespread adoption of software engineering methods, provision of Computer-Aided Method Engineering (CAME) tools has become a priority.
Karayaz, G.; (2011)

The purpose of this paper is to develop the concept of project management system from the perspective of systems science. There is a need to extend the body of knowledge for project management. In particular, the application of systems perspectives and systems theory offers a significant opportunity to advance the current state of project management knowledge. Although there have been suggestions of systems approaches for project management, rigorous systems science has not been used to support these depictions. First, we develop the background and define a perspective of project management systems.

Xing Sun (2008)

This paper studies the integration methods of project management (PM) system based on ontology theory. An ontology is a collection of key concepts and their inter relationships collectively providing an abstract view of an application domain. Paper focuses on the methods of ontology integration for project management system, ontology-based projects heterogeneous database integration and local ontology construction. It also builds an interacting architecture of project information based ontology.

Peng Wuliang (2010)

In this paper project management is an important component of product life cycle and increasingly important role in modern enterprise management. In this paper, we studied the design and development of product development project management information system (PD-PMIS). Firstly, the project management process and its integration are discussed, and then the process of product
development projects integrating technology and management requirements are considered.

**Brown, N(2002)**

The work described has been driven by the desire of an internationally recognized manufacturing company, Rediffusion Simulation Ltd. to improve the bid definition process. In the domain of flight simulator manufacture, the process of project bid definition is one which is time-consuming, and yet must occur within very limited timescales. The processes involved in bid definition are, ideally, exactly the same as those of full project management. The authors present research which investigates the use of the knowledge-based system paradigm in the domain of project management.

**Shuai Zhang (2010)**

In this Paper the author explains with the development of parallel computing, distributed computing, grid computing, a new computing model appeared. The concept of computing comes from grid, public computing and SaaS. It is a new method that shares basic framework. The basic principles of cloud computing is to make the computing be assigned in a great number of distributed computers, rather then local computer or remoter server. The running of the enterprise's data center is just like Internet. This makes the enterprise use the resource in the application that is needed, and access computer and storage system according to the requirement.

**Chunye Gong (2010)**

This paper includes the Cloud computing emerges as one of the hottest topic in field of information technology. Cloud computing is based on several other computing research areas such as HPC, virtualization, utility computing and grid computing. In order to make
clear the essential of cloud computing, we propose the characteristics of this area which make cloud computing being cloud computing and distinguish it from other research areas.

S. Khan (2011)

This paper explains cloud computing is a massively central advancement in the technique that businesses and users devour and work on computing. It's a elementary modify to an prepared model in which applications don't subsist out their lives on a specific section of hardware and in which possessions are more supplely deployed than was the historical standard. It's a primary shift to expansion and utilization model that replaces hard-wired, proprietary associations surrounded by software components and the clients of those components with unimportant Web services and Web-based software admittance.

Xu Wang(2011)

This paper describes the development of parallel computing, distributed computing, grid computing, a new computing model appeared, called cloud computing. It aims to share data, calculations, and services transparently among users of a massive grid. It became a hot issue for its advantages such as “reduce costs”, “increase business flexibility” and/or “provide business continuity”. In this paper, we described what is cloud computing and took Google's cloud computing techniques as an example, summed up key techniques, such as data storage technology (Google File System), data management technology (Big Table), as well as programming model and task scheduling model (Map-Reduce), used in cloud computing, and then some example of cloud computing vendors were illustrated and compared.

Clark, B.K. (1996)
This paper discusses a research effort to determine the effect that Software Process Maturity has on software development effort. Case studies to date report a cumulative positive effect when increasing the Process Maturity on a project and across an Organization. A new software cost estimation model, COCOMO 2.0, is used to account of all of the factors that influence effort thus permitting the isolation of Process Maturity's effects. The results of this research will identify a short-term gain from investing in software process improvement.

Zheng Li (2010)

This paper introduces the complexity of Service-Oriented Architecture (SOA), cost and effort estimation for SOA-based software development is more difficult than that for traditional software development. Unfortunately, there is a lack of published work about cost and effort estimation for SOA-based software. Existing cost estimation approaches are inadequate to address the complex service-oriented systems. This paper proposes a novel framework based on Divide-and-Conquer (D&C) for cost estimation for building SOA-based software.

Bin Mansor (2010)

This paper has the accuracy and efficiency of cost estimation methodology for web-based application is very important for software development as it would be able to assist the management team to estimate the cost. Furthermore, it will ensure that the development of cost is within the planned budget and provides a fundamental motivation towards the development of web-based application project. The literature review reveals that COCOMO II provides accurate result because more variables are considered including
reuse parameter. The parameter is one of the essential variables in estimating the cost in web-based application development.

**Gerhard Chroust (1996)**

This paper has the developing software products is both a technical and a managerial challenge. The integration of these two areas (the logical/technical prescription of the process model with the resource-oriented planning and control of project management), however, still needs further discussion and clarification. In this paper we discuss the relation of the components of a software development process and their counterparts in project management.

**Casper Lassenius (2002)**

This paper had deploying an appropriate software process can improve the effectiveness of software engineering. Still, small companies find it hard to allocate resources to software process improvement and tailor existing process models for their needs. In this paper we present a tentative framework for managing software product development in small companies. The framework combines business and process management through four cycles of control: (1) Strategic release management provides the interface between business management and product development. (2) Release project management handles the development of individual product versions. (3) Iteration management deals with the incremental development of product functionality within release projects, and (4) Mini-milestones are used to get an indication of system status during development.

**Ephraim Feig (2008)**

The purpose of this panel is to present a broad range of best practices of SOA strategization and operationalization in the use of web services in real-world SOA
implementations. The focus will be on the common challenges and issues encountered in SOA projects. Topics include, but are not limited to, tenets, methodology, architecture, service management, standards, tools, process, organization, governance, security, and quality of services. Practitioner's guides and anti-patterns as well as trends will be discussed in the context. Real-life pragmatic solutions to business problems will be exemplified and illustrated in case studies.

**Jan Bergandy (2008)**

This paper explains any credible software engineering program must thrive to connect college education with the realities of commercial software development. In most cases, the study of software processes takes place in the lecture halls but it is not practiced in student projects. Students graduate into the commercial world driven by software and business processes without any hands-on experience and thus without an in-depth understanding of the significance of a process to the industrial setting. In order to close this gap, we have chosen to use a commercial grade process framework.

**Barry Boehm (2009)**

This paper was at University of Southern California (USC), CSCI577ab is a graduate software engineering course that teaches best software engineering practices and allows students to apply the learned knowledge in developing real-client projects. The class is used as an experimental test-bed to deploy various research tools and approaches for validation of new methods and tools. Various research data have been collected as partial basis for twelve PhD dissertations. This paper reports how research and education are integrated via project experiments and how the results strengthen future educational
experiences.

**Eric Ras (2009)**

This paper explains even though Wikis have made their way into software engineering practice, the number of empirical evaluations is not significant enough yet to make a statement on which software engineering phases wikis should be used for. This is also due to facts that wikis and related Web technologies are evolving fast and that a lot of effort is spent on developing new, innovative wiki-based solutions for specific software engineering activities.

**Andreas Discher (2009)**

In this paper the author explains Project Portfolio Management (PPM) systems can be a valuable contribution for a sustainable innovation management and product development. A major pre-condition is a standardized process with defined business services that encompasses project data repository, project assessment, selection, reporting, and portfolio reevaluation. This paper presents a multidimensional evaluation framework for research and development projects in industrial engineering that also considers innovation aspects. Furthermore, we describe the business services needed for PPM and evaluate its practical applicability by mapping these business services to technical web services provided by a commercial software product.

**Winnie W Hua (2009)**

This paper presents an overarching metamodel for service-oriented architecture roadmapping (SOAR). An SOA roadmap is of paramount importance to strategize and operationalize an effective SOA program in a heterogeneous enterprise computing environment. There are 20 steps defined in the framework, broken down into 4 streams:
Planning and Analysis, Design and Construction, Deployment and Operations, and Management and Governance. The key inputs and prerequisites are specified for each step in the major streams. The detailed artifacts in each step are articulated in the context. This roadmap can serve as a holistic blueprint to adopt and implement SOA in a large organization.

**Jun Liu (2009)**

This paper includes software that adopts service oriented architecture has specific features on project scope, lifecycle and technical methodology, therefore demands for specific defect management process to ensure quality. By leveraging recent best practices in projects that adopt service oriented architecture, this paper presents a defect prediction model for software based on service oriented architecture, and discusses the defect management process based on the presented model.

**Ricardo Neisse (2009)**

In this paper service-oriented architectures, services are the basic building blocks to dynamically compose complex business process across multiple administrative domains. The main goal is to support companies in the outsourcing of services to service providers that best suit their business needs, and dynamically re-assign the services to other providers when changes in the business are necessary. The dynamic re- assignment of service providers in an open service market will only be successful if appropriate trust management mechanisms are put in place to provide guarantees that the desired service requirements are fulfilled.

**Dejun Chen (2009)**

This paper analyzes the requirements of a Virtual Enterprise access control. An SOA-
based virtual enterprise access control model is proposed to handle resource management. The authorization mechanism and the operation process of the model are explained. Meanwhile, the components and the framework of the model are given. Finally, a team project development management platform based on the SOA-based virtual enterprise access control model is shown, which provides a solid foundation for the reasonable implementation.

Jonas Helming (2009)

In this paper, software engineering projects, there are two different types of modeling tools. On the one hand, there are tools to model the system under construction, i.e. tools for requirements or UML tools for design. On the other hand, there are tools to model the project itself such as project management tools, bug trackers, or tools to model the organizational structure. In typical software engineering projects, the artifacts managed using these two types of tools are not integrated with each other.

Zhao Yongyi (2009)

In this paper, service-oriented architecture (SOA), the services and workflows have a close relationship, a number of services can constitute workflows, and the service itself can be achieved based on workflows. Because of dynamic changes of the constitution and service itself, the distributed computing method is quiet different with the traditional workflow management model in service-oriented workflow (SOWF) definition, management and operation. Moreover, the architecture of its system also embodies the characteristics of distributed computing, so in order to resolve the service-oriented workflow management system across different organizations, systems, entities of the synergy between the scheduling difficulties, this paper discusses service-oriented
workflow management system based on the structure of a service-oriented workflow management system in a number of services and the workflow management, and their communications standards.

**Nir Mashkif (2009)**

This paper explains businesses recently began shifting from proprietary models towards industry standards. Today, when businesses are faced with medium and large SOA projects, they strive to standardize their business process models, information models, and message models by complying with known industry standards. As service orientation and composition become more important, these standards also become critical for efficient SOA integration.

**Feng Jingchun (2009)**

In this paper the Project Contract Model decides the relations among IT project owners, contractors, managers/consultants and subcontractors. The owner should select the contract model according to the situation and the demand of project construction. From the owner's aspect, this paper analyses the design requirements of IT project contract model, the entity business contract model and non-entity business contract model, and the meanings, characteristics, scope of application of every model. Based on the research above, it is found that the entity business contract model includes IT project general contracting model.

**Stefanie Betz (2009)**

This paper explains globally distributed software development is widely used in industry, for example, to stay competitive in the market. To achieve competitiveness one needs
cost reduction, delivery of best quality, use of latest high-tech skills, as well as reliability and creativity. The key criteria for all these factors is well educated people. Yet, software engineering education hardly focuses the needs of distributed software development. Consequently, the graduated students rarely possess necessary skills and hands-on experience required for such projects; e.g. communication skills, project and process management as well as knowledge management.

**Bin Xu (2009)**

This paper explains software quality is essential to software development projects, from the aspects of the customer, sponsor, development team and quality assurance team. Though there are kinds of test tools which help us to find the defect more efficiently, many researchers agreed that it is not enough nor efficient to validate the software product after it is produced.