

# Exploring Enterprise, System of System, System, and Software Architecture

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## I. INTRODUCTION

Enterprise, System of Systems, System, and Software architectures explicitly or implicitly play critical roles in developing complex systems and the ultimate success or failure of those systems. Yet, what constitutes each of these architectures, their relationships to each other, and their significance in developing successful systems is often vaguely understood. Often, projects and organizations develop unique distinctions between the types of architectures, based on application domain, organizational boundaries, or the skills of specific individuals, introducing risks to the system as some design decisions “fall through the cracks” and other decisions are delayed due to unclear or overlapping authority. This workshop will seek a more structured and systematic treatment of the relationship between the types of architecture.

In this workshop, we intend to explore and answer the following questions:

- What are enterprise, system of systems, system, and software architectures?
- What do these architectures have in common and what makes them different?
- Where does one type of architecture end and another begin (e.g., how do you know when you have moved from talking about enterprise architecture to system of systems architecture)?
- What do we mean when we say “we’re designing” one of these architectures (e.g., what activities are we performing, what types of requirements are we dealing with, what types of design decisions are we making)?
- What do architects for one type of architecture need to know about the other types of architecture?
- What commonalities exist among activities that are performed for each type of architecture (e.g., specification, evaluation)?
- What are the relationships among the documentation artifacts of the different types of architectures?
- What is the impact of design decisions made for one type of architecture on the other types of architectures?

- What are the challenges (e.g., requirements, design, management, funding, and authority) unique to each type of architecture?

## II. WORKSHOP FORMAT

This one day workshop will include various presentations, discussions, and working group sessions on enterprise, system of systems, system, and software architectures.

## III. INVITATION TO CONTRIBUTE

Attendees are invited to develop and present position papers on the following:

- defining enterprise, system of systems, system, and/or software architecture
- identifying commonalities/differences between architecture types
- commonalities among architectural activities performed for each type of architecture
- the importance or unimportance of distinguishing between architecture types
- other experiences related to the questions listed above

Approximately 15 minutes will be allocated for each position paper presentation.

Please submit position papers to [wicsa-architecture-workshop@sei.cmu.edu](mailto:wicsa-architecture-workshop@sei.cmu.edu) no later than August 28<sup>th</sup>, 2009.

For more information about the workshop, please visit [www.sei.cmu.edu/architecture/WICSA2009ArchitectureWorkshop](http://www.sei.cmu.edu/architecture/WICSA2009ArchitectureWorkshop).

## IV. DISSEMINATION

Workshop notes with the accepted position papers will be distributed at the workshop.

Post-proceedings including revised or extended position papers and workshop results will be posted at [www.sei.cmu.edu/architecture/WICSA2009ArchitectureWorkshop](http://www.sei.cmu.edu/architecture/WICSA2009ArchitectureWorkshop).

## V. ACKNOWLEDGEMENTS

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