

*Are you looking for someone who is both an experienced real-time systems engineer & software engineer, who also specializes in Software Systems Requirements Engineering, Software Systems Architectural Design and Simulation Development as well the application of new processes, new methods, and new technologies to the software system development environment within your organization?*

*Perhaps this is the resume you've been looking for . . .*

***Kent D. Palmer, Ph.D.***

<http://kentpalmer.name>

***Systems Engineer, Software Engineer & Technologist***

"My objective is to find a position of responsibility implementing new technologies within the system engineering and software engineering development process, then to use these technologies to increase productivity and improve system and software quality. The proper use of tools in the development of real-time systems requires knowledge of process, methods, standards, and metrics, combined with development experience. I have a broad range of experience to offer any engineering organization interested in enhancing its real-time embedded technology capability as a way to increase its competitiveness."

See <http://onticity.com> <http://agiletheory.com> <http://scaleagile.com>

# TECHNICAL SPECIALIZATIONS:

- **Real-time Software Engineering**
  - Architectural Design of Real-time Systems
  - Implementer of Real-time Systems
  - Real-time Methodology Expert
- **Systems Engineering**
  - Requirements Engineering
  - Systems Modeling with Formal Methods
  - System Architecture Design
  - Use Case Modeling
  - Systems Traceability
- **Technologist**
  - Agile Software Tools and Methods
  - Systems Engineering Tools
  - Traditional Software Engineering Environments
- **Process Engineering**
  - Scrum Software Development Process
  - Agile, Lean, and Flow Practices
  - Traditional CMMI Process Improvement
  - Six Sigma
- **Agile Transformation**
  - Helping Restructure Organizations for Agile at Scale execution using Leffingwell development approach
  - Helping Product Managers and Product Owners to organize Product Backlogs
  - Helping Scrum Masters facilitate Self-organization of SCRUM Teams
  - Application of Reinertsen Flow second generation Lean principles to large projects
- **Domain Engineering**
  - Domain Analysis
  - Product Line Features
  - Building Domain Specific Languages
  - Design Domain Language research & development
- **Semantic Ontology**
  - Ontology development
  - Semantic Applications using Ontologies
  - Systems Engineering Ontology Research
  - Software Ontological Engineering
- **Systems Science**
  - Application of Systems Theory to Software and Systems Engineering
  - Systems Thinking approach applied
  - Socio-Technical Systems
  - Soft Systems Methodologies
  - Systems Dynamics modeling
  - Continuous, discreet, and queuing Simulations development

# BACKGROUND:

Current Status: Unemployed

\* Major Engineering Controls Company – June 2011 to September 2012 (Contract)  
Software Systems Engineer and Technologist, Process Engineer

*Most recent assignment:*

## **Lead of Agile at Scale process definition effort**

- Produced Agile at Scale and Lean Process architecture based on Leffingwell, Rinertsen, Jacobsen and other sources
- Researched Agile at Scale problem and instituted a Leffingwell based Agile at Scale approach within the organization
- Worked closely with the organization's Agile Mentor and Trainer to align a new process description with Agile, Lean, Flow, Six Sigma training and principles
- Produced a Portfolio level process along with Program and Team level processes that conform to Agile at Scale Standard
- Performed Agile at Scale training within the organization
- Aligned the Agile at Scale process with the ALM toolset using TFS to carry the information of the process rather than documentation
- Solicited feedback about actual practices in organization for adaptation of Process model to the organization
- Reconciled what is actually done within the organization's Agile adopters and what should be done for standards or compliance issues
- Established a Practice based approach with light weight process description
- Elicited Process Policies and Requirements from the organization and adapted the process to the needs of the organization
- Worked out how the organization could converge on a common process without stifling innovation within the teams to produce process variations as needed
- Produced transition strategy between old Waterfall Process and new Agile at Scale process
- Wrote Agile at Scale process descriptions as a starting point for discussions about adaptation to the organization
- Consulted with Agile teams on the introduction of the new process
- Reconciled various standards with Agile and Lean principles within the process such as ISO 9001, FDA, ISO 12207, IEC 61508, and CMMI

*Last Assignment, 1 year*

## **Lead Designer of Team Foundation Server (TFS) platform for Requirements Engineering**

- Designed Requirements, User Story, Task, and other work items for Requirements based on Scrum and Agile models
- Developed an approach to Requirements Management for an Agile Environment.
- Produced Requirements, Design, Developed Prototype Work Items, and developed final version for production use
- Knowledgeable concerning use of Third Party tools that work with TFS with regards to upstream work, for instance, TeamSpec, InteGreat, Urban Turtle, Code Collaborator, Redimine, etc.
- Produced and Delivered Work Item Usage Training
- Developed Deployment Plans and participated in Deployment after TFS Platform Release
- Worked with Developers under Safety and other Regulations to develop a more complete system for the regulated development using TFS
- Developed Process Templates, creating new Work Items, Link Types, Field Types

- Designed a full set of Work Item Templates to cover the entire development process with necessary traceability linkages built in for larger and regulated programs
- Developed Agile/Lean processes and practices
- Assisted in developing an Agile at Scale Development process model, which is being implemented
- Produced recorded classes in Camtasia specific to the tailored TFS environment for deployment
- Worked with an Agile/Scrum team during development as a team member
- Interfaced with Process Group concerning Process/Tool Alignment
- Worked with Agile Coach to develop Agile Practices and to align ToolsSet with Agile/Lean/Kanban development approaches
- Consulted with internal customers concerning Requirements Management and Traceability practices using tools such as DOORS, RequisitePro, Spreadsheets, and TFS to find best the fit for projects, and to inform the design of scalable common solutions
- Helped run Company Wide Requirements Management User Group

\* Major Aerospace Company – February 2005 to December 2010

### **Principle Systems Engineer**

*Most recent assignment:*

#### **Requirements and Verification Systems Engineer**

**Authoring Requirements Verification Reports**

**Setting up DOORS for Requirements Tractability**

**Setting up an Information Consolidation (Wiki) System for Operations Support**

**Performing Requirements Analysis and Tracing**

**Performing Requirements Change Management**

**Attended high level Program Management Reviews to monitor change impacts**

**IR&D on Domain Engineering and Model Based Systems Engineering implementing the infrastructure for a proposal and design center**

**Systems Engineering Process Lead**

**Second Ph.D. 2009 in Systems Engineering at the Defence<sup>1</sup> and Systems Institute ([DASI](#)) program at the University of South Australia; Thesis title: Emergent Design.  
<http://arrow.unisa.edu.au:8081/1959.8/74458> See also <http://emergentdesign.net>**

\* Raytheon -- June 1999 to February 2005

### **Principle Systems Engineer**

*Most recent assignment:*

#### **Systems Engineer for Radio Networks**

**Proposal**

**IMS development, Risks and Assumptions, Software Thinspecs,**

**WBS and Scope Documents, interface with Supply Chain Management**

**Radio Network Host Development Manual Update**

Systems Engineering Process Improvement at CMMI Level 3 moving toward CMMI Level 5

Systems Engineering Process Development and Deployment

Project Systems Proposal Activities

Systems and Software Engineering Process Appraisal based on CMMI

(helped attain SE Level 3, then two practices short of SE CMMI Level 5, December 2003)

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<sup>1</sup> Australian Spelling

Six Sigma Certified Specialist (Green Belt with Black Belt classes)  
Systems Engineering and Software Engineering  
Trained CMMI Assessor  
Trained Integrated Process Development System Deployment Specialist  
Integration of Software and Systems Engineering Processes for OPF, OPD, OID  
(Helped attain Level 5 in SW CMMI, December 2003)  
Coordination with Program Management concerning SE ROM bids and SE proposals  
*Systems of Systems* Methods and Process Research

**Developed and delivered a course on: Software Requirements and Architectural Design Methodologies at the local University of California Irvine Extension (Fall 1999)**

※ Boeing -- September 1985 to June 1999

**Software Engineer and part time Systems Engineer**

**Specializing in Real-time Embedded System Design & Ada/C Implementation**

**Focused on Architectural Design, Software Requirements, and also Simulation development**

*Last Major assignment:*

*Team Leader for both Systems and Software Requirements as well as Software Architectural Design, and then Software Developer for Detailed Design, Code, and Test on a Satellite Sensor Payload System*

**Other areas of competence . . .**

Software Project Team Leader  
Architectural Designer using Real-time and Object Oriented Methodologies for Software Engineering  
Requirements Analyst for both System level and Software level requirements  
Object-oriented Simulation Design & Implementation  
Practitioner using Formal Requirements Methods for Systems and Software Engineering  
Software Process and Systems Process Consultant and Technologist  
Design Methodology Research and Tool Development  
Formal Requirements Methods Research and Technology Transfer  
Human Interface Software Design & Prototyping  
Former Software Engineering Process Group Chairman, Process Assessor and Change Agent  
Lead in Software and Systems Engineering Process, Methods, and Tools development and implementation  
Technology Transfer Specialist

**First Ph.D. 1982 in Sociology at the London School of Economics, University of London**

**Full-time graduate student -- 1973 to 1982**

**Ph.D. degree obtained 1982**

**Subject: Philosophy of Science**

Dissertation Title:

The Structure of Theoretical Systems in Relation to Emergence.

Dissertation analyzed the impact of new things coming into existence on the structure of scientific theories.

University of Kansas -- 1969 to 73

Full-time undergraduate student. Graduated with two majors. Sociology Honors and East Asian Studies.

## ESSENTIAL SKILLS:

- Agile at Scale Process Designer and Implementer based on Leffingwell development model
- Reinertsen Flow second generation Lean development principles
- Technologist and Tool developer for Agile/Lean processes using Team Foundation Server
- Design and Development of a Requirements Management solution in Team Foundation Server
- Requirements and Verification Systems Engineer
- Real-time embedded software systems design, prototyping, and implementation.
- Object-oriented simulation design and development
- Software and systems engineering process definition
- Engineering-wide work process architecture development
- Research into Systems Engineering and Software Engineering Processes, Methods, and Tools
- Research into Formal Requirements Methods
- Research into Domain Engineering and Model Based Systems Engineering
- Research into Design Methodologies
- Project planning and project leadership
- Development of software engineering technology applications such as CASE tool design and prototyping and environmental integration
- Trained at Software Engineering Institute, Pittsburg, PA to perform appraisals of software development process execution
- Performed audits of division Systems, Hardware and Software process using Capability Maturity Model Integrated (CMMI) according to SEI SCAMPI assessment methodology
- Performed audits of division Software process using Capability Maturity Model (CMM) according to SEI assessment methodology
- Studies of methodological issues such as the application of the object-oriented methodology to the analysis and design of real-time systems
- Studies of the application of Domain Specific Languages at the Systems Engineering level
- Development and maintenance of databases and models for productivity and quality analysis
- Research into use of new technologies, technology infusion and transfer to early adopters
- Principal evaluator for many engineering tools
- Planning and execution of technology enhancement programs
- Contact for technology transfer from aerospace consortia, e.g. SSCI(SPC), SEI, and SPIN

# EXPERIENCE:

## SYSTEMS ENGINEERING:

- Systems Engineering Requirements and Verification on Satellite program**  
*Requirements Change Management, Requirements Management in DOORS, Requirements Verification*
- Systems Engineering IR&D on Satellite Ground Systems**  
*Developed Processes and Methods for Constellation Control Prototype Development.*  
Key development systems engineer working to integrate prototypes to produce ground system of the future.
- Systems Lead on Satellite Payload Processor**  
*Organized Systems Engineering effort on major project.*  
Collected issues and analyzed their project impact.
- Systems Engineering Process Development and Deployment**  
*Focal point for SE Process Maturity improvement.*  
Helped the SE process owner to develop a process improvement strategy and implement it within the organization.
- Systems Process Methods and Tool Research**  
*Have been practicing Systems Engineering based on recent research into Systems Processes, Methods, and Tools attempting to put these improvements into practice by example use.*  
Solid Theoretical Background in Systems Science

## SOFTWARE ENGINEERING:

- Software Requirements, Architectural Design and Implementation of Satellite Sensor Payload System:**  
*System has two PowerPC processors and 40 C40 Digital Signal Processors and contains Five CSCIs.*  
Helped setup processes, methods and tools for project.
- Simulation Development:**  
*Knowledge of object-oriented discrete event and continuous system dynamic simulation systems.*  
Wrote simulation with dynamically programmable attributes that modeled multiple vehicle interaction scenarios.
- Implementation Experience:**  
*Industrial experience in higher level programming.*  
Designed and implemented Cache in Ada code for large Database project.
- Human Interface Design:**  
*Skilled in use of User Interface Management Systems.*  
Created expert system user interface.
- Software Reuse:**  
*Adept in Software Reuse Technology.*  
Developed software reuse plans.

## SOFTWARE TECHNOLOGY:

- Requirements Methods:**  
*Research into Formal and Semi-formal Methods.*  
SPC CoRE, Software Cost Reduction, Parnas' Four Variable Method, Gurevich Abstract State Machine (ASM) Method, N. Leveson's RSML, Statemate, SRI's Prototype Verification System, Z, VDM, RAISE
- Requirements Engineering Technologist:**  
*Developed Advanced Requirements Engineering solution based on Team Foundation Server*  
Developed Requirements, Designed and Implemented Full Lifecycle support of Agile/Lean development using TFS work items
- Real-time Design Methodologies:**  
*In-depth experience using many methods in design work.*  
Architectural and detailed software design.
- Software Work Process Implementation:**  
*Put in place a complete software process for development.*  
Chairman of Division's Software Engineering Process Group (SEPG).
- Cost Estimation Parametrics:**  
*Estimated software size, effort & schedule for bids.*  
Built historical productivity database.
- Environment Building:**  
*Constructed a unified environment for development.*  
Evaluated Computer Aided Software Engineering tools.

## **Other works:**

See <http://archonic.net> and <http://holonomic.net>

Curriculum Vita at [http://works.bepress.com/kent\\_palmer/](http://works.bepress.com/kent_palmer/)

## **Personal Data:**

- o U.S. Citizen.
- o Will consider relocation.
- o References will be supplied upon request.

## ***Contact:***

### **Kent D. Palmer**

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*For further details see source URL <http://kentpalmer.name>*

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