Distributed Development Seminar

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1.0 Purpose

This document provides an example of a typical tailored 1 day seminar for a Distributed Development team provided by PEM Systems. The document will provide the reader with strategic information showing you how we help distributed development teams succeed.

2.0 Executive Summary

At PEM Systems we believe, based on our experience over the past ten years helping organizations succeed with distributed development, that to be effective, collaboration techniques must be integrated into a client's management and development approach. In the proposed 1-day workshop your project leaders will learn key collaboration techniques along with approaches to integrate these techniques into existing management and development practices.

Paul McMahon will deliver all training for this seminar. The Author of "**Virtual Project Management: Software Solutions For Today and the Future**"; he has successfully delivered similar Distributed Development seminars tailored specifically to the needs of critical projects in numerous high technology organizations.

Paul's past client's, for which he has done similar seminars, include Raytheon, L3 Communications, BAE, Alion Science and Technology, Northrup-Grumman and the Department of the US Navy.

This 1-day team building seminar will be developed and focused specifically on the key issues identified from discussions with your team leaders. In this highly interactive seminar your Senior Managers and Directors will learn proven best distributed development practices through actual scenarios tailored to your organization's needs demonstrating optimum solutions to collaboration challenges.

Where possible our intent is to use your own project specific scenarios as this approach has proven most effective to aid learning and distributed project success. This is the best form of training to help people with the actual challenges they are facing on their real projects. Through this workshop your Senior Managers and Directors will gain more than just the latest distributed development techniques and practices. They will learn practical approaches to help solve current project challenges faced, and techniques to mitigate potential future risks.

While seminars developed by Paul McMahon are based on his past distributed development research and personal case study experiences, as documented in his book, his tailored seminars reflect the most current and up to date thinking on how to best address today's collaboration challenges.

PEM Systems' business strategy focuses on helping high technology distributed development organizations through a hands-on approach. As a consultant Paul works

directly with his client's-- not telling them what to do-but collaborating with them to help them find their own optimal solution to their distributed development challenges. His wealth of experience will be shared during this seminar, and his expertise can be made available subsequent to the seminar for follow up project guidance and support.

3.0 Corporate History and Philosophy

Paul E. McMahon, Principal, PEM Systems, has been an independent consultant since 1997, helping primarily distributed organizations improve their management and development practices and techniques.   He has taught software engineering at Binghamton University, State University of New York; has conducted workshops on engineering processes and management; and has published more than thirty-five articles, including several on distributed development. He has also published a book on distributed development titled, **"Virtual Project Management: Software Solutions for Today and the Future."** Paul's seminars, where he provides his insights, reflect 24 years of engineering and management experience working for companies such as Link Simulation and Lockheed Martin.

Paul's past client's, for which he has done similar seminars, include Raytheon, L3 Communications, BAE, Alion Science and Technology, Northrup-Grumman and the Department of the US Navy.

Paul's research into distributed operations began in the late 1990s after having participated on a number distributed development efforts where he began to realize that the common and unique characteristics of these efforts warranted a more systematic approach to help organizations facing future similar challenges.

IT consultant and project manager, Mike Tarrani, stated after evaluating Paul's book from the perspective of an IT professional that Paul, *"approaches the way to establish and effectively manage a virtual team by focusing on the key barriers and offering solutions..."*

Today Paul McMahon has expanded his consulting work to include providing assistance to organizations that are looking to increase their agility and/or process discipline. He promotes solutions through proven and practical lean principles. Unlike many other industry leaders, Paul McMahon's interest in the agile and lean movements was actually initiated by observing practices that worked best to achieve success when your teammates were not all located in the same physical space. Paul's philosophy reflects a belief that discipline and agility are not at odds and that Agility, Discipline and Collaboration integrated together is the best path to a winning strategy and successful projects.

Paul's approach to training is to involve his seminar participants in learning optimum solutions by employing real world scenarios, facilitating participant brainstorming, and follow up reinforcement through sharing of proven best practices and pitfalls to avoid. Paul's philosophy reflects a goal of continual improvement which he accomplishes by staying actively involved on real projects working closely with many of his clients.

Paul is currently working on a multi-national, multi-cultural distributed project called Semat (www.semat.org), which was initially led by Ivar Jacobson, Bertrand Meyer, and Richard Soley. Paul has led the Assessment track of Semat, which includes participants from around the globe including Australia, Sweden, England, South Africa, Canada, and the United States.

PEM Systems future direction is to continue to help high technology organizations through leading edge process-oriented technical and management solutions. For more information about Paul McMahon and PEM Systems refer to www.pemsystems.com.

4.0 Understanding of Client Needs

The aim of the seminar is to build more of a team feeling between senior managers and encourage them to collaborate more. Critical to achieving the goals of this seminar is effective communication of collaboration options and techniques to build key remote relationships.

The managers are all very experienced, and our goal is to give them best practices, and techniques to apply in their real job. This seminar will reinforce how these practices can help them in their real job through facilitated scenario discussions that will be tailored to be directly relatable to the participant's real job. Participants will leave this seminar with more than best practices and techniques. They will also understand how they can apply these techniques to help solve the real challenges they are currently facing on their current project.

5.0 Detailed Description of Key Elements of Course

For Senior Managers and Directors to effectively collaborate on a distributed development effort requires a perspective that considers multiple factors including *people, product*, and *process*. Key elements of this course are structured around these three key factors.

At a more granular level an *eight step distributed development framework* is employed (as described in Paul's book, Virtual Project Management).

- Key high level elements of course:
  - People
    - Team Dynamics (Communication)
      - Client Tailored Scenarios and Solution Brainstorming
  - Product
    - Architecture & Allocation of Work
      - Client Tailored Scenarios and Solution Brainstorming
  - Process
    - Practices, Tools, & Measurement
      - Client Tailored Scenarios and Solution Brainstorming

Based on discussions with the Project leaders the material within the three high level course elements will be tailored to fit within the 1-day seminar to focus on the most important areas *selected* from the topics below:

Guidelines For Building & Deploying A Successful Collaborative Plan
- An Overall Approach To Collaborative Operation Planning & Deployment
- Keys to a Successful Plan
- Five (5) Common Pitfalls Implementing Collaborative Operations
- How to Establish & Meet Realizable Objectives
- How to Identify, Build & Deploy Successful Collaborative Processes, Procedures, Tools & Environments
- How to Organize & Manage the Successful Implementation of the Plan

Tools, Processes & Collaborative Environments
- An Examination of Tools, Processes & Procedures from the Productivity Perspective
- How to Determine the Right Level of Collaborative Procedures & Tools
- How to Build & Deploy Successful Collaborative Procedures & Tools
- Keys to Building Collaborative Environments that Facilitate the "Move Work, Not People" Paradigm
- Techniques to develop practices that are "distributed team friendly"

Fostering A Collaborative Culture
- Focuses on Individual Behaviors Including Senior Engineers & Managers
- Investigates Key Techniques & Individual Behavior Changes Necessary to Effectively Share Work
- Identifies two (2) Powerful Techniques to Foster a Collaborative Culture

Managing At-A-Distance
- Identifies Key Techniques to Achieve Successful Remote Task Management
- Discusses Varying Task Management Styles & Consequences
- Discusses Status & Control in a Virtual Environment
- Discusses & Identifies a Key Cost Control Technique Effective in Virtual Environments

Virtual Project Organization & Leadership
- Identifies Key Techniques to Setting Up & Executing a Successful Virtual Project
- Identifies Key Skills Required of Virtual Project Leaders
- Discusses Organizational Variations
- Identifies Recommended Virtual Organization Structures
- Discusses Key Management Processes that Require Change when Operating in a Virtual Environment

- Includes discussions of Risk Management, Conflict Management, & Cost & Schedule Management

Virtual Communication & Virtual Teams
- Discusses How Communication Changes in a Virtual Environment
- Identifies Common Pitfalls & Recommendations in the Use of E-Mail
- Identifies Common Pitfalls & Recommendations in the Use of Tele & Video-Conferencing
- Identifies Common Pitfalls & Recommended Rules for the Operation of Virtual Teams

6.0 Detailed Description of Methodology and Tools Used

During the first hour of the seminar an overview of the material including the objectives of the course, and how those objectives will be achieved will be provided. During this part of the course the material is motivated by identifying at a high level the typical challenges faced on distributed development efforts. The focus is on how distributed development challenges differ from traditional collocated efforts.

As the course progresses the instructor will engage participants in increasing in depth discussions by asking a series of questions. The questions at first appear easy to answer which helps to get the group involved. These questions relate to how managers do their job today in traditional project environments. As the course proceeds, more discussion occurs facilitated by specific scenarios that are presented. The participants are challenged to address how they might handle their previously discussed traditional job activities as they face a distributed development environment.

Fundamental to the methodology is to engage the participants in open discussions with the goal of getting them to use their own experience to help find practical solutions and options to the new challenges they will face. After each of these "discovery discussions" best distributed practices others have used, along with pitfalls to avoid are shared.

This methodology is effective because it leads to a focus on the real problems the participants face, rather than on theoretical situations they may have trouble relating to, as often happens when pre-packaged, or poorly tailored, training material is employed.

Tools employed include powerpoint slides, easels with white pads, and large wall space to tack up results of discussions for ease of reference back.

7.0 Pedagogical Approach to Achieving Objectives

Fundamental to the pedagogical approach is to involve the participants in discovering the issues they will face, where things will be different from their previous experiences, what their options are, and advantages and disadvantages of each. Then to reinforce what they have discovered by sharing best practices and pitfalls learned by others.

By using interactive real scenarios that are developed to closely relate to the participants real job we make it easier for the participants to interact and maintain interest. It is easier for them because they know how they operate today and we have found through experience giving similar workshops that most people are comfortable entering into discussions related to how they do their job today.

Through the discussions we consider "*what-if*" scenarios and ask participants to share how they would handle various situations. By comparing how they operate in a collocated environment to what might be different when the team is distributed, they begin to discover their own answers. This approach tends to have far better long term results than just telling the participants what they should do.

This approach works best because the participants not only learn the best techniques, but they learn why these techniques are necessary by discovering for themselves the new challenges and issues they will face in a distribute environment.

Where possible we prefer to use real scenarios that directly relate to the participants current situation. This allows us to provide *real-time* project help through the training. This is a clear benefit over pre-packaged training material where participants may have difficulty relating to the material presented. I have used this technique successfully in the past where we have actually used the workshop to facilitate planning a distributed project or "refining" an existing plan. This is the best form of training because it helps people with the actual challenges they are facing on their real projects today.

8.0 Training Material Proposed

Presentation slides are provided ahead of time through email to a point of contact at the location where the training will take place. It is requested that the customer at the site of the training make hardcopies of the material and place in booklet form for handout to participants. Copies of the instructor's book can be purchased for a nominal fee.

9.0 Consultant Team Preliminary Composition

Paul E. McMahon, Principal, PEM Systems, author of *"Virtual Project Management: Software Solutions For Today and the Future,* will provide all seminar training.

10.0 Client Contacts Where Similar Work Done and References

1. **Don Procuniar**, L3 Communications,
Coauthor of published article with Paul McMahon, "AVCATT_A: A Case Study of a Successful Collaborative Development Project".

This article is available for review through PEMSystems.com web site,
http://www.pemsystems.com/avcatt-case-study.pdf

Contact Information: Donald.Procuniar@L-3Com.com

2. **Michael R. Oakes**, **PHD,** CMSP, Alion Science and Technology

Contact Information: mroakes@alionscience.com

 Tel: (757) 857-5670 ext 249, Cell: (757) 561-3324

3. **Ed Harvey,** Former President & CEO of BMH, A Simulation and Modeling Company

Contact Information: ed.harvey@verizon.net, Tel: 757-651-4110

10.1 Comments of Past Attendees of Paul McMahon's Distributed Development Seminars

 LCDR Dylan Schmorrow, PHD, Office of Naval Research

"…allowed many individuals from various organizations to come to a common understanding of the path forward…had not been accomplished in prior two years…Enabled the seemingly impossible to become probable."

Denise Lyons, PHD, NAWCTSD

 "…the tailored workshop addressing a specific project is absolutely fantastic...would like to have this workshop attended by the leaders of all my projects!"

10.2 Further References/Reviews

Mike Tarrani, IT consultant and project manager, March 16, 2004, ★★★★★
Perfect for managing off-shore teams

When this book was first published nearly four years ago from the date of this review, it addressed a narrow niche - managing virtual teams in large-scale engineering projects…Fast forward to today, and the material no longer addresses a narrow niche, making this book an important resource to a much wider audience…I am evaluating this book from the perspective of an IT professional, and see the audience as ...project and program managers overseeing development that has been outsourced to off-shore providers…IT professionals who have (or are in danger of) losing their jobs because of the trend towards off shore outsourcing… *Managing virtual teams is a viable, alternative career option in which this audience segment can employ their technical knowledge and gain the management knowledge to be successful*…Executive management exploring the feasibility, risks and challenges of outsourcing to off shore providers and who are seeking a management strategy for making it work… the author weaves in cases, personal experience and anecdotal stories into the text making the book highly readable. He approaches the way to establish and effectively manage a virtual team by focusing on the key barriers and offering solutions…I particularly liked the knowledge dissemination and retention strategies the author provides… an often overlooked element that will make or break a geographically and culturally dispersed team's success. The core of

this book..is the structured and methodical eight-step framework... For each of the… steps the author provides in-depth details, challenges and how to overcome them, and supporting rationale. In addition, the appendices in this book are invaluable in that they contain templates, checklists, and other information that fleshes out what is required to effectively manage a virtual team. Appendix L, 'Synopsis of 34 Insights and 50 Solutions', is especially valuable because it summarizes the key challenges of virtual team management.

Alan Zeichick, Editor-in-chief SD Times

"…one of the most fascinating books I've read for some time. The author, Paul E. McMahon, has not only cogent observations and recommendations, but also a storytelling writing style that makes this information-packed book deceptively easy to skim. It is tempting to read quickly—but slow down. The solutions that McMahon offers are often quite subtle, and are deserving of careful contemplation….The issues he addresses in "Virtual Project Management" are real and indeed waste a lot of time, money and resources. Before you start a new interorganizational task force, give this book a read. It might make the difference between spectacular success and abject failure." (Exerpted from July 15, 2001 SD Times Review)

11. Examples of Successful Deliveries of Similar Work
Refer to Section 10 of this proposal. In particular, see article on AVCATT_A project co-authored by Paul McMahon and Don Procuniar, and reference quotes from past attendees of Distributed Development Seminars.

12.0 Estimate of Costs and Related Assumptions and Rationale

Cost is partitioned into three pieces:
- Pre-seminar tailoring of seminar material.
- Delivery of Seminar
- Travel

Pre-seminar tailoring costs include:
- Data gathering (phone/skype calls, emails to discuss project specifics and priority areas for seminar)
- Tailoring of Powerpoint material and aids
- Preparation of scenarios and discussion facilitation

13.1 Travel Costs
Actual travel costs are invoiced. Consultant seeks to comply with the US Federal Travel Per Diem rates. Estimated cost of travel (airfare, hotel, meals…)

13.2 Cost Assumptions and Rationale
PEM Systems is confident that this offering provides the best value available on the market today for a tailored distributed development seminar that meets customer needs.

There are four primary reasons why PEM Systems can offer a high quality seminar at a highly competitive rate. First, most of the material for this seminar has been previously developed and proven effective based on past successful deliveries as identified above in Section 10. Second, PEM Systems has developed an efficient and effective approach to tailor this material to the unique needs of each client. Third, at PEM Systems we are aware of the competitive marketplace for training products. Fourth, while we provide seminars to our clients, training is not our only product. A significant part of our business is generated by consulting support and much of that business is generated through contacts acquired through our seminar offerings. While our seminar clients are at no obligation to request additional consulting support as follow up, subsequent to a seminar many clients return to PEM Systems for follow up assistance. This is further evidence of the value our product provides to our clients and provides motivation to us to keep our seminar offerings at extremely competitive pricing.

Beware of seminars that focus on providing pre-packaged material with a minimum of tailoring to address the client's real needs. At PEM Systems we believe value is best measured by the ultimate success of the client's distributed development projects.

14. Financial, Contractual terms

Payment is net 30 days in US dollars from date of invoices. Invoicing will not occur less than every 30 days. Seminar material provided by PEM Systems to buyer is subject to the following contractual terms:

- The seller (PEM Systems) grants to buyer a royalty-free worldwide license to print, display, copy and distribute the work created by the seller and delivered to buyer for use only on projects associated with this contract.
- Buyer agrees not to remove, deface or obscure seller's (PEM Systems) copyright or trademark notices and/or legends or proprietary notices on its materials. Buyer further agrees that if it copies any seller materials, it shall also copy any such legends and notices.

15. Logistical Equipment Provided By Buyer
- Display Projector
- Computer to display powerpoint slides
- Two easels with white pads
- Colored markers
- Pins/method to affix white sheets to training room walls
- Sufficient wall space to tack up 10-15 white pad sheets
- Seminar room configured with participants sitting in the round
- Hardcopies of Paul McMahon's slides packaged in booklets for attendees