



# In the 'Know'

A Newsletter of the Knowledge & Information Professional Association

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## KPM

### Symposium

July 26-27

OSU-Tulsa

Early bird registration extended until July 11!!!

Register now at <http://kipanet.org/>

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[www.kipanet.org](http://www.kipanet.org)



**Day 1** features current PMI Global Board Member **Diane White** whose presentation is about making Project Management a strategic competency in your organization. The balance of day one will feature talks from leaders in the oil and gas industry including **Jared DeShields** (Williams), **Phillip Robinson** (Samson) and **Eric Freeman** (TD Williamson). Other talks will be given by **Chuck Tryon**, professors from TU (**Dr. Bradley Brummel**), OSU (**Dr. Rick Wilson**), and North Texas University (**Dr. Suliman Hawamdeh**), and representatives from the Oklahoma Museum Network (**Sherry Marshall**) and Oklahoma A+ Schools (**Alissa Crawford**).

**Day 2** opens with a very important keynote by **Phil Barnett** of PricewaterhouseCoopers in Tampa. Phil is a Managing Director with PwC and led the formation of their Knowledge Services Organization. Phil has offered to explain the process PwC uses to forecast and validate a return on investment (ROI) for their sizable KM investment. Phil will then be joined by local executives **Dennis Neill** (Samson), **Dr. Dan Duffy** (OU) and **Jacci Green** (QuikTrip) in a round table to discuss practical ways to establish a ROI for an Knowledge Management investment in your organization. PwC's **Len Jaszczak** will then update us on how they are integrating their national and international KM efforts.

The afternoon of day two features **Dr. Dan Duffy**, Dean of the OU School of Community Medicine, as he describes Practice-Based Learning and Improvement, a strategy for transferring knowledge to highly trained, intelligent professionals. He will be followed by **Dr. David Kendrick** who describes how a very modern approach to Knowledge Management is being used to improve community health in the Tulsa area. Rounding out the afternoon is a presentation on practical business intelligence by **Craig Dean** and gathering the right information by **Dr. Jeff Crawford** (TU).

To view the full conference schedule or to register for KPM, visit our website at <http://kipanet.org/>.

Join us for the next

## KIPA Quarterly Meeting

August 31, 11:30 a.m. @ The Green Onion ([www.greenoniontulsa.net](http://www.greenoniontulsa.net))

where we will discuss

Developing the "Wise" Organization:

*Making Knowledge Management a Continuing Capability*

Presented by **Dr. Margaret White, OSU-Tulsa**

additional information on the talk subject and speaker are included on p. 3

Pre-registration is required - visit <http://kipanet.org>

Meeting cost: free for KIPA members, \$10 for non-members

Registration fee does not include cost of the meal.

## Message from the KIPA President

The KPM Symposium planning has been underway for a number of months, so it is exciting to see everything come together at last. The KPM planning committee has done an outstanding job putting together another high quality two day event. Whether you are interested in pure KM, want to learn more about instilling creativity in your organization, or need tips for motivating your team, there's a little something for everyone. As with past years, KPM will be an excellent event. The speakers are great...the facilities are top notch...and the subject matter... well, that's what makes it all so exciting! Make sure to register and attend this year's KPM!

Jeff Crawford, KIPA President

## Knowledge in Print: A Book Review by Joe Colannino, "TRIZICS"



TRIZ is a Russian acronym for Theory of Inventive Problem Solution. In the 1940's G.S. Altshuller (1926-1998) studied invention in a novel way. Rather than interview inventors in hopes of advancing psychological theories of invention, he studied their output – specifically patents. Thus TRIZ systematizes known results and does not depend on unverifiable mental models of inventiveness. Altshuller ultimately surveyed about 200,000 patents. His work has now been extended and validated into the millions of patents. What Altshuller found was that all inventions could be reduced to 40 inventive principles and 39 parameters. The basic method is to reduce the problem to a contradiction and resolve it (Cameron provides a TRIZ table to select which method(s) will solve the contradiction).

For example, suppose you need something to be lighter AND longer. Because longer things are heavier and not lighter, one has a basic contradiction. In TRIZ, weight of a stationary object is Parameter 2 and its Length is Parameter 4. Again, there are 39 such parameters. Using the TRIZ table, one finds a number of standard principles to solve the contradiction: For example, one may change materials (Principle 35) or add holes/porosity (Principle 31) among other changes.

TRIZ forces “out of the box” thinking. However, most problems can and are solved by thinking “inside the box”; in a sense, that is the definition of a discipline. It is only when standard tools of the discipline cannot solve the problem at hand that out-of-the-box thinking is required. The marriage of inside-the-box and outside-the-box thinking is one reason that Cameron’s TRIZICS is so powerful.

In addition, Cameron assembles and organizes all kinds of ancillary support systems. For example, one powerful mnemonic is MATCHEM – systems tend to begin mechanically (M) and become augmented by acoustics (A), thermal (T), chemical (CH), electric (E), and magnetic (M) or electromagnetic inventive principles. Consider the evolution of the drum: acoustics were subsequently enhanced, thermal treatment was added to produce more uniform drum heads from natural materials such as animal skins, chemical formulations were adapted for synthetic drum heads, electronic amplification was added, and then electromagnetic systems (synthetic drums) were finally introduced. Overlying this general development, evolutionary trends toward increasing completeness and coordination/harmonization were applied to produce drum kits – a coordinated assembly of various drums; Cameron describes eight such evolutionary trends. *(continued on p. 3)*

## More About KIPA's August 31th Speaker...Dr. Margaret White

Margaret A. White, Ph.D. is a member of the management faculty at Oklahoma State University. She has a Ph.D. with a major in management and a minor in industrial engineering from Texas A&M University. Her M.B.A. and B.S. in mathematics are from Sam Houston State University. Professor White is the author/coauthor of over 80 articles and papers. Her research has appeared in journals such as *Strategic Management Journal*, *Academy of Management Journal*, *Academy of Management Review*, *Entrepreneurship: Theory and Practice*, and *Organizational Studies*. In 2006, she coordinated a Strategic Management Society pre-conference session on sharing knowledge across boundaries and silos—academics, practitioners and consultants. The second edition of *The Management of Technology and Innovation: A Strategic Process Approach* with co-author, Garry D. Bruton was published this year. Dr. White has won several research and teaching awards including two Academy of Management Best Paper Awards and Best Paper from the Southern Management Association. The teaching awards include the Greiner Teaching Award and OSU-Tulsa outstanding faculty award. Before becoming an academic, Dr. White was a statistical analyzer for a major oil company, owned a catering business, was a housing administrator, and a collegiate softball coach. During her tenure at OSU, she served 4 years as Associate Dean of Undergraduate programs. Currently, she serves on several boards of directors as well as a member of both the Addiction Ministries and Summer School committees of the Oklahoma UMC Addiction Ministry. In addition, she is part of the Homeless Services Network group in Tulsa, a member of the Agency Board for the Community Food Bank of Eastern Oklahoma, and a regular server/cook at St. Paul's UMC Manna Meals.

**Presentation abstract:** We often discuss topics such as data, data mining, information processing, knowledge gathering, database development and knowledge management. However, the goal of the organization is to develop capabilities that lead to creating value. These are tools and processes for developing the “wise” organization. This session will characterize the “wise” organization and discuss how the tool and processes can be used to develop organizational wisdom.

## Knowledge in Print: A Book Review by Joe Colannino

*(continued from p. 2)*

Additionally, one learns four types of problem categorization: cause unknown, cause known, improvement/development, and failure prevention. These ancillary structures are important, because TRIZ is designed to solve cause-known problems, so some sort of root cause analysis must be bolted onto TRIZ to make the method comprehensive. This is another of Cameron's many contributions turning TRIZ into TRIZICS.

The book is organized into 11 Chapters and 8 Powerful Appendices: Chapter 1) Introduction to TRIZICS, 2) Standard Structured Problem Solving, 3) Cause-Effect Chain Analysis, 4) Ideality, S-curves, and Trends of Evolution 5) Nine Windows, the Anti-system, and DTC operator, 6) Functionality, Functional Modeling, and Trimming, 7) Scientific Effects, 8) Inventive

Standards and Su-field Modeling, 9) Part 1 Contradictions and ARIZ Tools, 10) Part 2 Contradictions and ARIZ Tools, 10) Subversion Analysis, 11) Root Cause Analysis; Appendix 1) The 39 Parameters and 40 Inventive Principles, 2) Contradiction Matrix, 3) The 40 Principles with Examples, 4) The 39 Parameters Definitions, 5) Inventive Standards Flowchart, 6) The 76 Inventive Standards, 7) Table of Specific Inventive Principles to Solve Physical Contradictions, 8) Flowcharts/Roadmaps/Templates.

As an innovation professional, I have headed R&D departments, produced patents, and invented my share of stuff. I have participated in many brainstorming, lateral thinking, and problem solution courses. I am not given to hyperbole: Cameron's book – a comprehensive guide to invention and problem solution – is the best I have ever seen, bar none. Its contents will easily support a full year course in invention/knowledge creation at the university level. A rich source of information, it will require careful study, reading, and re-reading to master its contents. However, it is worthy of the effort. TRIZICS is the new quintessential resource for creative problem solving and invention.

**Joe is an experienced CTO, innovator, and KM professional. He has led global R&D and NPD efforts for several world-class companies. Today he continues his innovating and problem solving activities through his firm, Colannino Consultants. LLC.**