

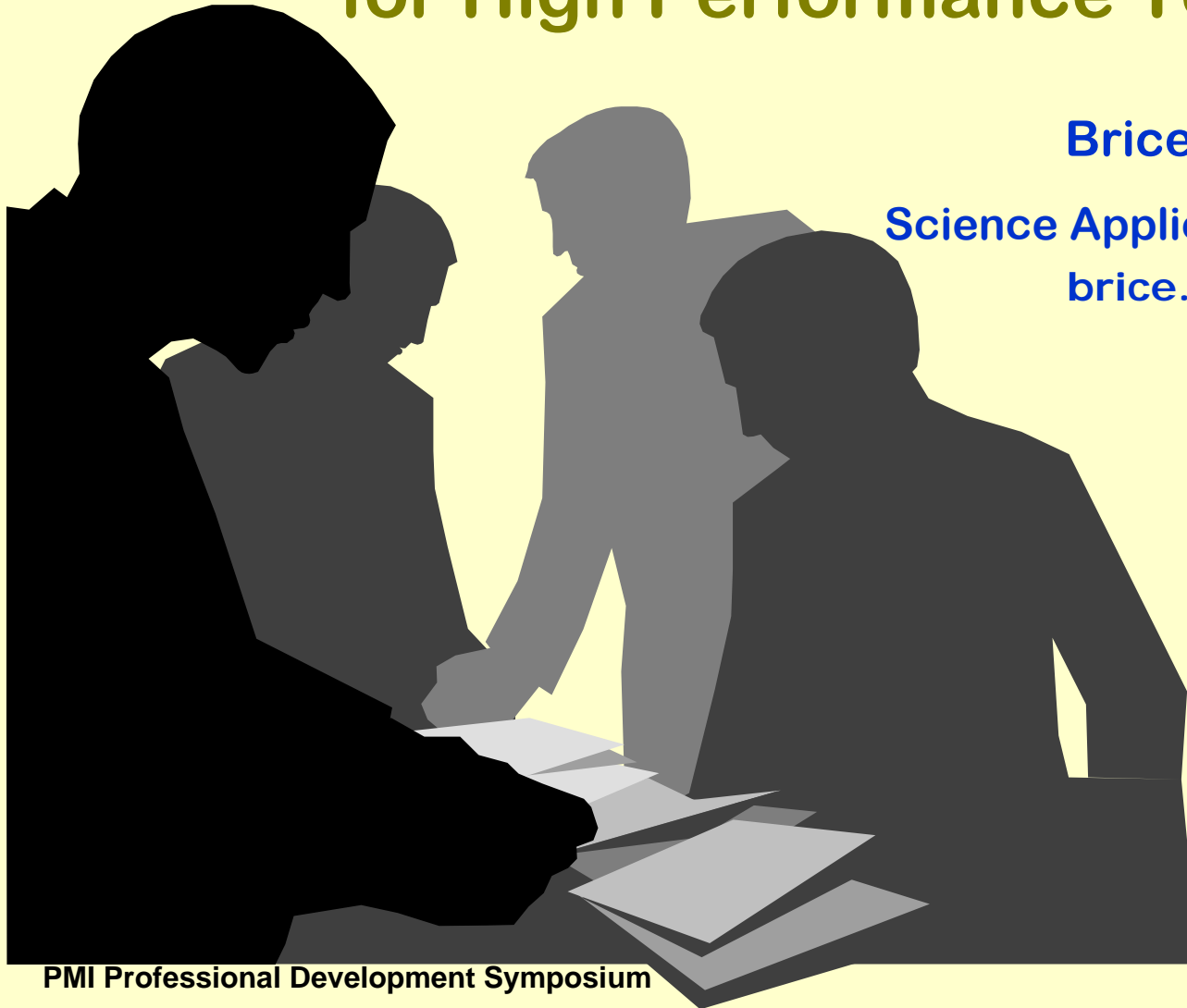
# Using Collaborative Technology to Streamline PMI Processes

## Computer Supported Collaboration for High Performance Teams

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**PMI Professional Development Symposium**

**VBC Huntsville 9-15-05**

# Using Collaborative Technology to Streamline PMI Processes

## Today's Briefing

- **Snapshot – What is an Electronic Think Tank?**
- **A Review – Quick Walk Through Recent History**
- **3 Minute Video Segment – Example**
- **Electronic Meeting System (EMS) Concepts**
- **Three Levels of Collaboration**
- **What is an Electronic Meeting System and how does it work?**
- **Feedback from Former Participants**
- **Benefits**
- **EMS Success Stories**
- **A Concept for Huntsville – Community Collaboration Center**
- **Questions**

# Using Collaborative Technology to Streamline PMI Processes

## Definition of a meeting:

- *"A meeting is an event ...*
- *...where you keep the minutes and throw away the hours."*

# Using Collaborative Technology to Streamline PMI Processes

## A quick walk through recent history:

- Introduced facilitated brainstorming sessions at IBM in 1964 (Poughkeepsie, NY – using manual methods)
- Was introduced to electronic brainstorming technology in 1991
- Introduced EMS at CSC in 1993 (Moorestown, NJ)
- Used EMS on the Navy Exchange Command (NEXCOM) contract to identify requirements and develop RFP (1993)
- Used EMS on the successful bid to win the Defense Commissary Information System (DCIS) contract (1994)
- Introduced EMS at NASA (MSFC) in 1995
- Introduced EMS NASA Agencywide (1996)
- Founded Teen Think Tanks of America , Inc. (1999)
- Installed EMS at Sci-Quest 3D Immersive Theater (2004)

# Using Collaborative Technology to Streamline PMI Processes

## A quick walk through recent history:

- **Involved with using EMS for:**
- **IBM Customer Advisory Council (Rochester, MN)**
- **NSF Industry Advisory Council - R&D for Collaborative Technology at University of Arizona**

# Using Collaborative Technology to Streamline PMI Processes

## A quick walk through recent history:

- **EMS white papers presented at:**
- **International Symposium on Productivity and Quality Improvement (Sponsored by IIE – Washington, DC)**
- **Hawaii International Conference on Systems Sciences (HICSS)**
- **International Association of Facilitators (IAF) Annual Conferences (San Jose, Williamsburg, Minneapolis, Toronto)**
- **Collaboration 2003 (Annapolis)**
- **Face to Face Technology Symposium (Georgetown University, Washington, DC)**
- **GroupSystems Worldwide Users' Conferences (3 years)**
- **CSC Global Technology and Business Solutions Conferences (Atlanta, Dallas, Tampa, Baltimore)**
- **IBM Worldwide Users' Conferences (Atlanta, New Orleans)**
- **CSC Leading Edge Forum (LEF) Conferences (Virginia)**
- **2002 National Youth Summit on Preventing Violence (Washington, DC)**
- **5<sup>th</sup> Annual Conference on Violence Prevention – Harvard University**

# Using Collaborative Technology to Streamline PMI Processes

**Now ...**

- **You're about to see a repeat performance of the "Streamlining PMI Processes" presentation from the PMI Professional Development Symposium here at the VBC in October 2004.**
- **I'm honored and delighted to have been invited.**
- **...You must be a glutton for punishment!**

# Using Collaborative Technology to Streamline PMI Processes

## A few examples of EMS application

- **EMS currently installed at:**
- **NASA** – Marshall Space Flight Center (MSFC) Huntsville
- **ARMY** – Sparkman Center, Redstone Arsenal, Huntsville
- **Department of Homeland Security**
- **IRS Modernization Project**
- **Approximately 1500 installations worldwide (not counting several other similar products on the market)**

# Using Collaborative Technology to Streamline PMI Processes

## ***Teen Think Tanks of America, Inc.***

*a 501(c)(3) non-profit charitable organization  
chartered in Huntsville, Alabama*

- A good example of a facilitated group process.
- ...with first-time participants and no training
- For more details, see: [www.teenthinktanks.org](http://www.teenthinktanks.org)

# Using Collaborative Technology to Streamline PMI Processes

*Here's a 3-minute video ... illustrating the EMS process:*

- **J F Kennedy High School  
Sacramento, California**
- **Composite clips from several TV news stories**
- **75 Students - 3 Sessions**
- **Some gifted, some average, some at-risk**
- **Notice how engaged they are and how seriously they are working in this exercise.**

# Using Collaborative Technology to Streamline PMI Processes

Resume here after video

# Using Collaborative Technology to Streamline PMI Processes

## An Endorsement:

**"I support the innovative brainstorming activities of Teen Think Tanks of America where students collaborate to address the growing problem of school violence and other teen concerns. I look forward to the continued expansion of this program."**

**-- Senator Richard Shelby (4/29/04)**

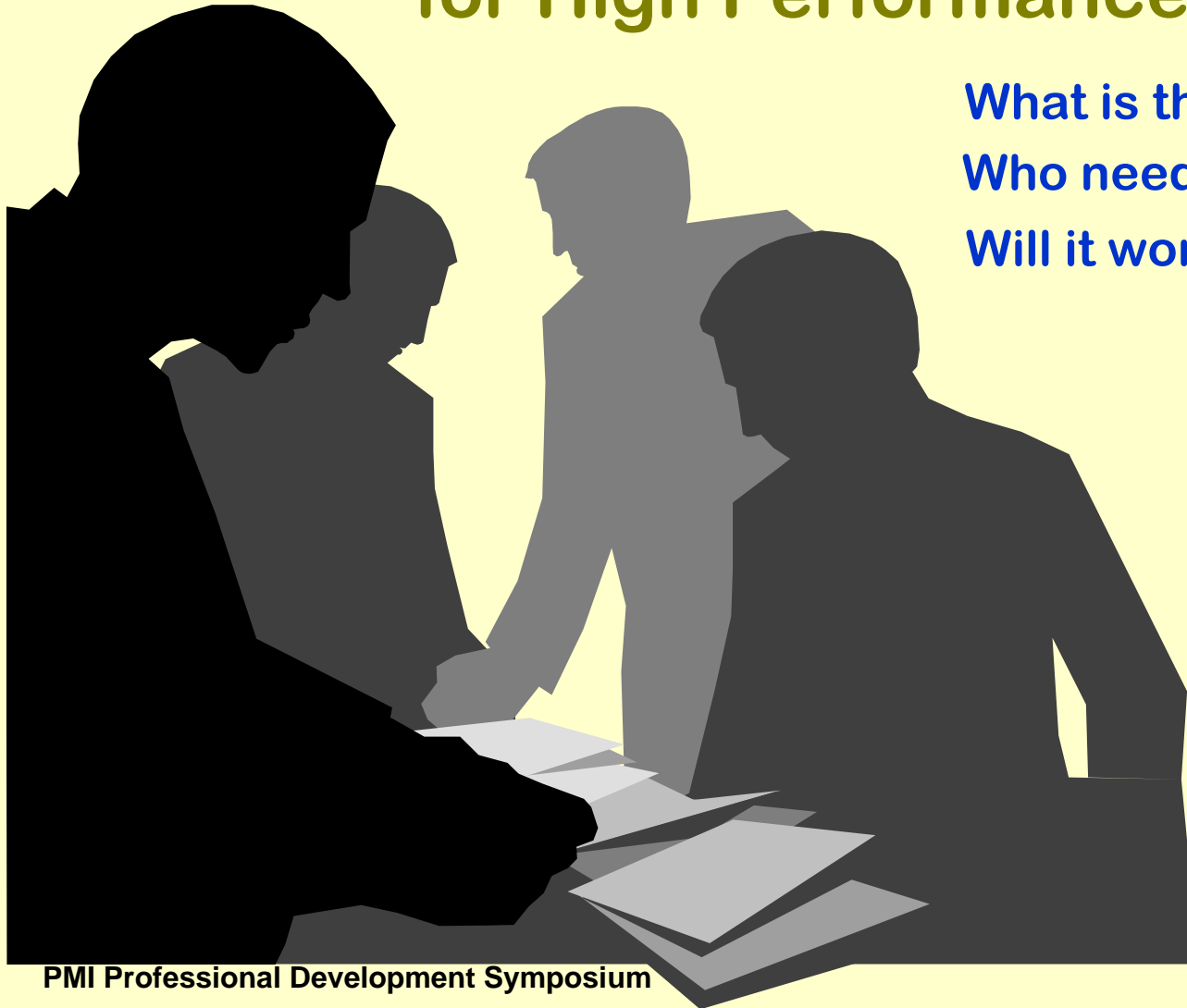
# Using Collaborative Technology to Streamline PMI Processes

## Computer Supported Collaboration for High Performance Teams

What is that?

Who needs it?

Will it work for my team?



# Using Collaborative Technology to Streamline PMI Processes

## Here's some terminology:

- **Computer-Supported Collaboration**
- **Electronic Facilitation**
- **“EMS” (Electronic Meeting System)**
- **They are really interchangeable ...**

# Using Collaborative Technology to Streamline PMI Processes

**Now, here are some typical EMS processes:**

**Strategic Planning**

**Project Management**

**Team Coordination**

**Knowledge Management**

**Business Opportunity Assess**

**Risk Assessment**

**Lessons Learned Sessions**

**Requirements definition**

**Focus Groups**

**Customer Feedback**

**Event Planning**

**Job Candidate Evaluation**

# Using Collaborative Technology to Streamline PMI Processes

**Some PMI processes from the BOK ... all good candidates to be streamlined with EMS:**

- **Team Building**
- **Consensus Development**
- **Scope Management**
- **Creating a WBS for the project**
- **Risk Identification**
- **Qualification of risks, risk rankings, trends**
- **Communications Planning**
- **Identify actual stakeholders and their needs**
- **Make or Buy analysis**
- **Developing a SOW**
- **Procurement Planning**

# Using Collaborative Technology to Streamline PMI Processes

## Computer Supported Collaboration or EMS

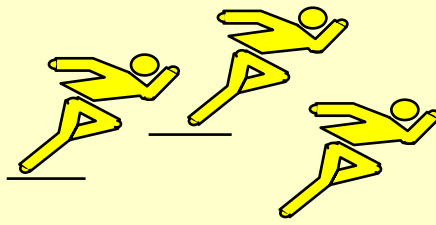
- **Completing in 1 hour what otherwise will take 8 hours**  
... with better results!
- **Meetings free of fear**  
... where everyone participates openly
- **Replace time-intensive, low-value/high cost tasks**  
... with high-value, rapid response processes
- **Reducing time required of participants**  
... more than 50%

# Using Collaborative Technology to Streamline PMI Processes

**There are three Levels of Collaboration**

# Using Collaborative Technology to Streamline PMI Processes

## Three Levels of Collaboration

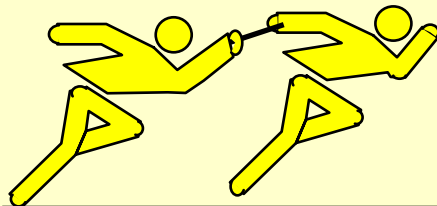


**Sprinters**

**1 - Collective (Indiv.) Level:  
Uncoordinated Individual Effort**

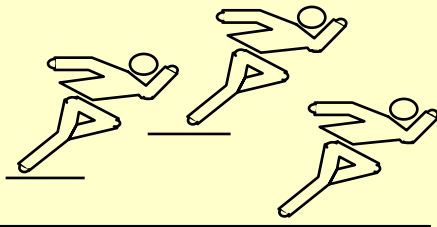
# Using Collaborative Technology to Streamline PMI Processes

## Three Levels of Collaboration



**Relay**

**2 - Coordinated Work Level:  
Coordinated-But-Independent**

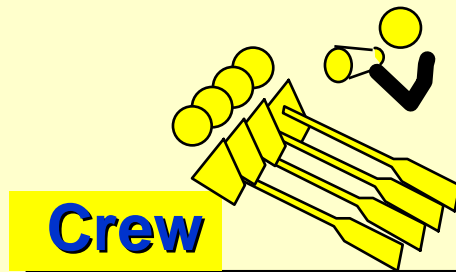


**Sprinters**

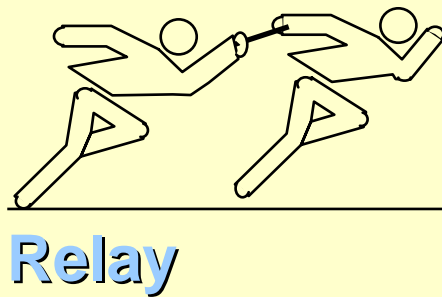
**1 - Collective (Indiv.) Level:  
Uncoordinated Individual Effort**

# Using Collaborative Technology to Streamline PMI Processes

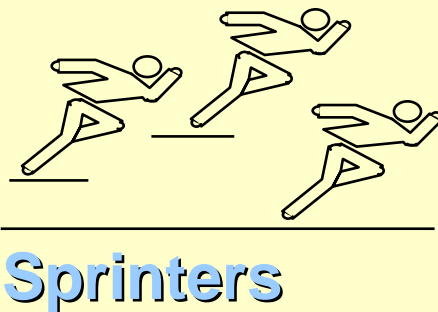
## Three Levels of Collaboration



**3 - Concerted Work Level:  
Concerted Effort**



**2 - Coordinated Work Level:  
Coordinated-But-Independent**



**1 - Collective (Indiv.) Level:  
Uncoordinated Individual Effort**

# Using Collaborative Technology to Streamline PMI Processes

## The Levels of Collaboration

**1 - Collective (Indiv.) Work Level**

# Using Collaborative Technology to Streamline PMI Processes

## The Levels of Collaboration

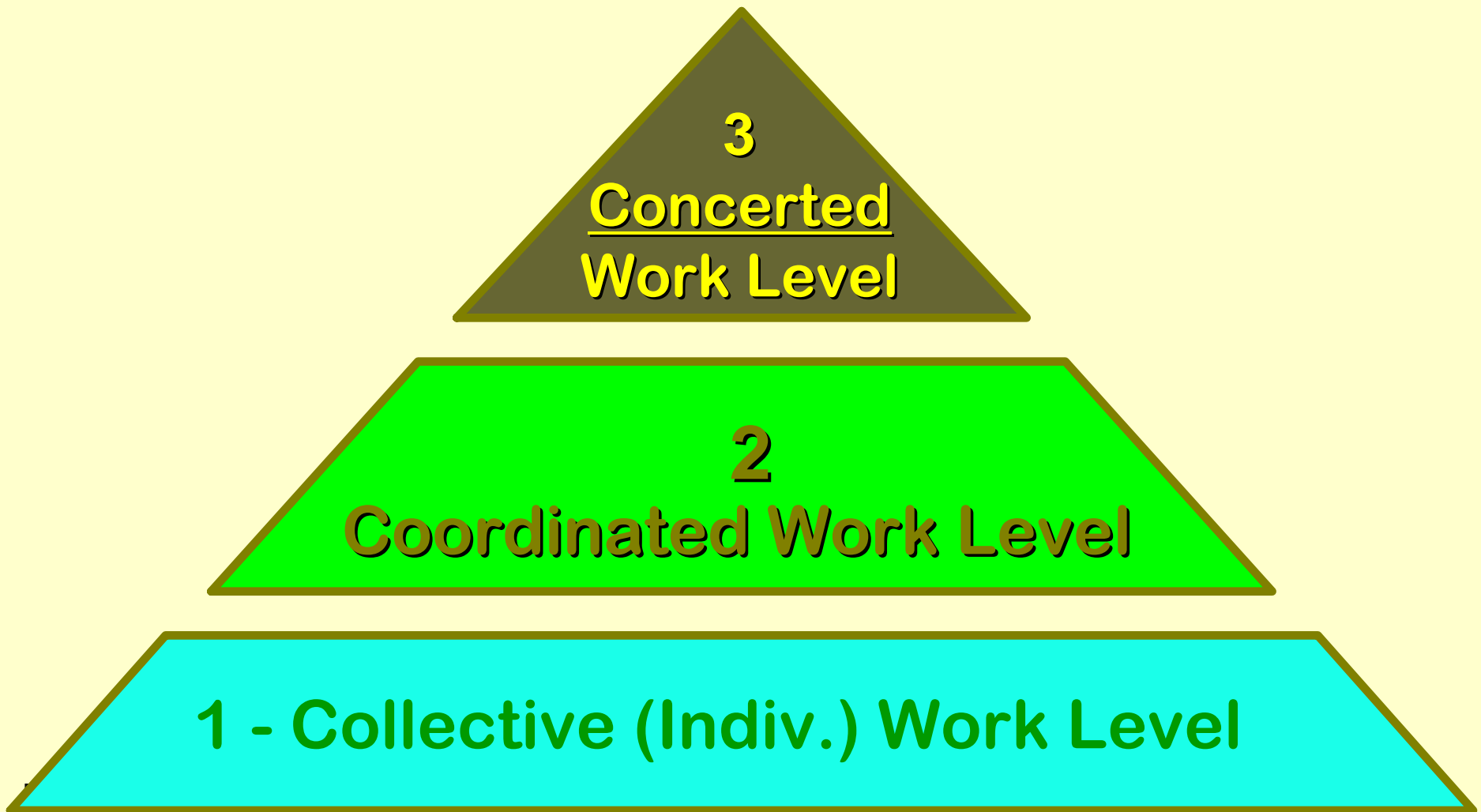
**2**

**Coordinated Work Level**

**1 - Collective (Indiv.) Work Level**

# Using Collaborative Technology to Streamline PMI Processes

## The Levels of Collaboration



# Using Collaborative Technology to Streamline PMI Processes

## Electronic Collaborative Tools for the Collective Work Level

(Familiar Tools to Improve Individual Productivity)

- **E-mail, Calendars**
- **Spreadsheets**
- **Presentation Graphics**
- **Word Processor**

**1 - Collective Work Level (indiv.)**

# Using Collaborative Technology to Streamline PMI Processes

## Electronic Collaborative Tools for the Coordinated Work Level

(Tools to Coordinate Individual Activity and to Share Information)



- **Team Database**
- **Web Conferencing**
- **Team Scheduling**
- **Workflow Automation**
- **Project Management**
- **Desktop Video**

# Using Collaborative Technology to Streamline PMI Processes

## Electronic Collaborative Tools for the Concerted Work Level

**Parallel Communication**

**Structured Processes**

**Idea Triggering**

**Anonymity**

**Idea Generation**

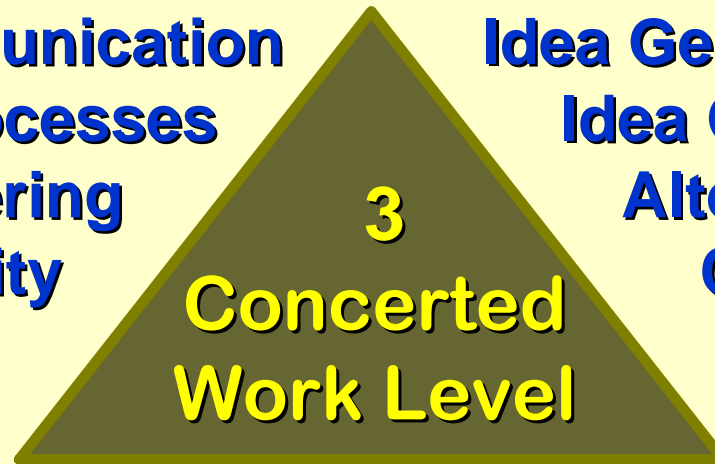
**Idea Organization**

**Alternative Evaluation**

**Consensus Building**

**Decision Support**

**Strategies**



*Opportunities and Problems of group work*

# Using Collaborative Technology to Streamline PMI Processes

## Some Collaborative Tools Currently Available for Concerted or Coordinated Work

Collaborative Tools For <b>Concerted</b> Work	Collaborative Tools For <b>Coordinated</b> Work
<ul style="list-style-type: none"><li>• Facilitate.com</li><li>• GroupSystems MeetingRoom</li><li>• GroupSystems II</li><li>• Grouputer</li><li>• Meetingworks</li><li>• WebIQ</li><li>• ... and others</li></ul>	<ul style="list-style-type: none"><li>• Lotus Team Workplace (...formerly "Quickplace")</li><li>• Microsoft LiveMeeting (... formerly "Placeware")</li><li>• NetMeeting</li><li>• OptionFinder</li><li>• WebEx</li><li>• ... and others</li></ul>

# Using Collaborative Technology to Streamline PMI Processes

## EMS – A Tool for Concerted Collaborative Work

An Electronic Meeting System (EMS) is a productivity tool that helps teams work together better and faster; reach consensus; prioritize ideas; and resolve conflict.

EMS is a set of software tools designed to provide electronic facilitation for workgroups and team processes.

EMS accelerates the collaborative process, sometimes by a factor of 10.

EMS has reduced project cycle time by 90 percent and person-hours by 50 percent.

EMS should be provided as a tool for facilitators, team leaders, and project managers.

# Using Collaborative Technology to Streamline PMI Processes

## Five Reasons EMS Works:

- **Parallel or Simultaneous Input**
- **Anonymity**
- **Triggering**
- **Structure & Focus**
- **Record Keeping**

# Using Collaborative Technology to Streamline PMI Processes

## EMS Tools/Processes

- **Electronic Brainstorming:** Unstructured idea generation
- **Categorizer:** Refine, Rearrange, Categorize ideas
- **Vote:** Prioritize, Measure consensus, Graph results
- **Topic Commenter:** Structured idea and information sharing
- **Group Outliner:** Build hierarchical process models
- **Shared Whiteboard:** Team Graphical Illustration
- **Alternative Analysis:** Evaluate alternatives using multiple criteria. Produce statistical and graphical results. “What if?” scenarios; Decision support.
- **Survey:** Create electronic questionnaires, subjective/objective questions.  
Collect & tabulate responses. Produce variety of reports.
- **Report Writer:** Store Results / Produce Reports

# Using Collaborative Technology to Streamline PMI Processes

## Again, What's So Special About EMS?

- Every participant uses a laptop computer that is interconnected with all the other laptops in the group.
- Everyone can see what everybody else is saying, but no one knows who says what.
- Now ... the most shy or timid person in the room can “*speak up*” boldly ... and be heard!
- The facilitator keeps everyone on track and on time.
- Every comment or idea is captured and stored automatically in the file server. (No “sticky notes”)
- Formatted reports and results are available instantly and may be distributed electronically.

# Using Collaborative Technology to Streamline PMI Processes

## Feedback From Former Participants

**“This is the best communication tool I have ever used...”**

**“We accomplished more in 2 hours with this approach than we have in the two previous days without it.”**

**“Most productive workshop I have ever attended...”**

**“The general consensus of our team is that this collaboration tool and the facilitator effectively cut meeting time in half.”**

**“... it increased the group productivity for this workshop by a factor of 10, at least.”**

**“... I really do believe Brice can herd cats!”**

# Using Collaborative Technology to Streamline PMI Processes

## Our Claim:

**”With computer-supported collaboration, a team can do in 4 hours what otherwise would take 4 days.”**

**But one former participant declared:**

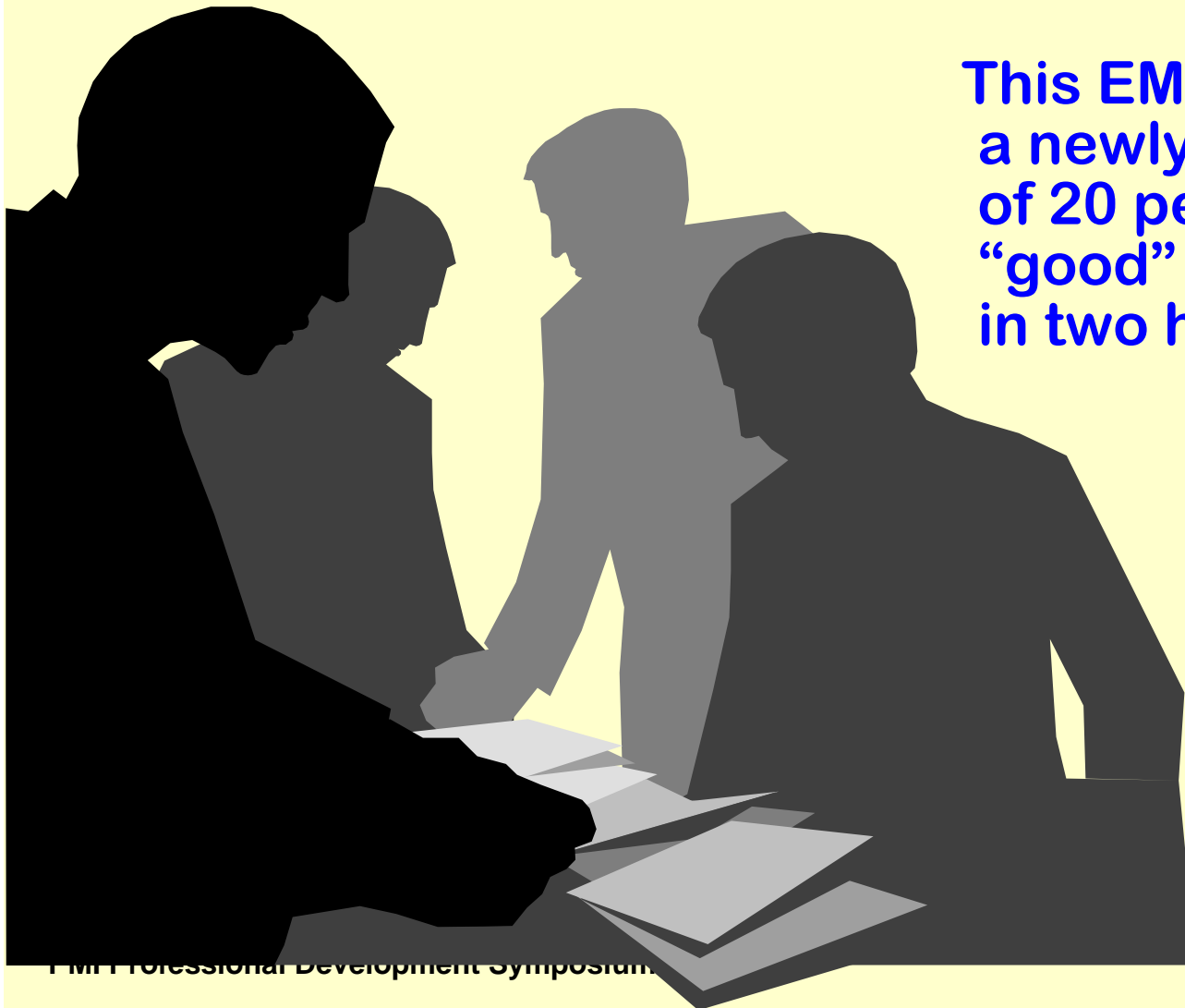
**“Shucks, using EMS a team can do more in 2 hours than a team without EMS could do in 2 weeks.”**

# Using Collaborative Technology to Streamline PMI Processes

## EMS Success Story

### Generate a Mission Statement in Two Hours

This EMS process enabled a newly formed task force of 20 people to generate a “good” mission statement in two hours.



# Using Collaborative Technology to Streamline PMI Processes

## What are the EMS steps?

- **Electronic Brainstorming for “building blocks” for the Mission Statement**
  - Consider products, services, value adds, stakeholders, customers, competitors, employees, etc.
- **Prioritize, categorize, and print the “building blocks”**
- **Group writing assignment - Teams of two to develop multiple “strawman” mission statements.**

# Using Collaborative Technology to Streamline PMI Processes

## Then what?

- **Each team of two submits their draft of the Mission Statement** (Time box = 15 minutes)
  - Using the “building blocks” as construction material ... no new nouns/verbs allowed
  - 20 people = 10 drafts in 15 minutes
- **Use the Vote tool to prioritize the drafts**
  - Everybody votes on every draft; Use 5-point scale (Strongly Like – Strongly Dislike)
- **Select the top 5 drafts to be reconsidered by the teams of two**

# Using Collaborative Technology to Streamline PMI Processes

## Final Steps

- Each team of two attempts to produce the “ultimate mission statement” using only the words from the top 5 drafts.
- Then - vote again...(Using same method as before) Each person submits a private ballot.
- Repeat this process until one draft has received the vote and acceptance by the group.
- (Outside activity: Designate a professional writer or grammarian to polish the final mission statement, subject to review and approval.)

# Using Collaborative Technology to Streamline PMI Processes

## Actual Time Required

- **Definitions..... 5 min.**
- **Brainstorm for building blocks.....10 min.**
- **Prioritize, categorize and print “building blocks” .....10 min.**
- **TC - teams of two (1st round).....15 min.**
- **Vote..... 10 min.**
- **TC - Vote “ultimate MS” (each round).... 20 min.**
- **Vote - Final approval..... 5 min.**
- **Verbal Discussion & Breaks..... 25 min.**
- **Total (assuming 3 rounds)..... 120 min.**

# Using Collaborative Technology to Streamline PM Processes

# Using Collaborative Technology to Streamline PMI Processes

## Success Story

### Quantitative SWOT Analysis – Analyzing Strengths, Weaknesses, Opportunities, Threats

A Quantitative EMS SWOT Analysis simplifies the process of determining the relevant strengths or weaknesses of an organization or a business opportunity.

# Using Collaborative Technology to Streamline PMI Processes

## Quantitative SWOT Analysis of Business Opportunities

- *Small Resource Investment -*

Entire process can be completed in one-half day, typically

- *Provides Objective Measure of Potential Success or Failure -*

Tangible results reduce uncertainty of business decisions based on intuition

- *Provides Valuable Information to Improve Competitive Positioning -*

Identifies areas to maximize strengths, minimize weaknesses, and mitigate threats

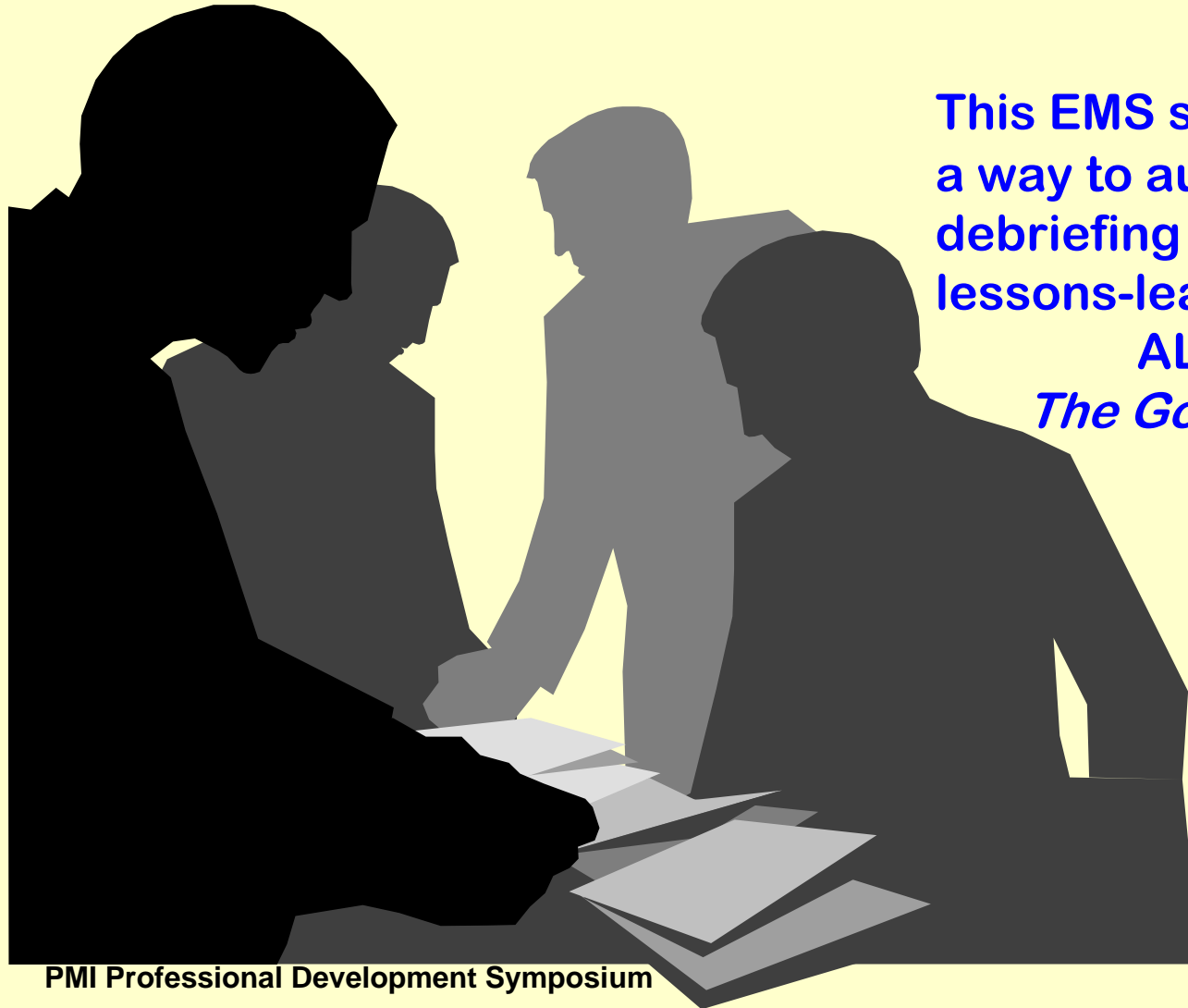
- *Maximizes Available Resources –*

Provides objective, tangible information so decision makers may focus efforts on business opportunities they are most likely to win

# Using Collaborative Technology to Streamline PMI Processes

## EMS Success Story

### Collaborative Debriefing/Lessons Learned Sessions



This EMS success story describes a way to automate the process of debriefing an event or to conduct lessons-learned exercises.

ALSO ...

*The Good, the Bad & the Ugly*

# Using Collaborative Technology to Streamline PMI Processes

## Lessons Learned – Ways to Improve Next Time

- What went right this time?
- What, if anything, went wrong this time?
- What, if anything, did we do that was *just plain stupid*?
- If you were to serve in a similar capacity next time, what would you do differently?
- What new or additional events/features/activities, if anything, should be added next time?
- What, if anything, should have been omitted this time?
- Recommended or needed improvements with established or existing processes.
- Other observations, comments, or recommendations for improvement.

# Using Collaborative Technology to Streamline PMI Processes

## Debriefing – The Good, The Bad, and The Ugly

- Use EMS parallel input for three topics (Good, Bad, & Ugly)
- “The Good” – While it’s fresh on your mind, please describe all the good things about this event.
- (Action) – Where possible, please describe how the good things could be made even better.
- “The Bad” – Please describe those things that were not so good, including minor mistakes or omissions.
- (Action) – What steps should be taken in the future to change the bad things into good things.
- “The Ugly” – Please describe those things that should be eliminated or avoided in the future.
- (Action) – How can the ugly things be eliminated or prevented in the future?
- Action Time Line – Identify lead times for all actions. (9 Mo., 6 Mo., 3 Mo., 30 Days, 1 Week, etc.)
- (Action) - Identify Responsible Parties and/or Volunteers

# Using Collaborative Technology to Streamline PMI Processes

## Documented benefits of EMS:

	<b>Labor Saved/project</b>	<b>Flow Time Saved</b>	<b>No. of Projects</b>
<b>IBM</b>	<b>55.2%</b>	<b>92%</b>	<b>50</b>
<b>Boeing</b>	<b>72.0%</b>	<b>65%</b>	<b>64</b>

# Using Collaborative Technology to Streamline PMI Processes

**Oh yeah, what's the new idea?**

- **Community Collaboration Center**
  - Carter Collaboration Center - Atlanta
  - Other Examples
- Currently running experimentally at Sci-Quest Center
- 3D Immersive Theater

# Using Collaborative Technology to Streamline PMI Processes

*a quick preview ... Some Possibilities for the CCC:*

1. **Community Focus Groups (Youth – Adults)**
2. **Community Needs Assessments**
3. **Program Evaluations for Sci-Quest (Teachers/Students/Others)**
4. **Customer/Client/Constituent Satisfaction Surveys**
5. **Event Planning and Coordination**
6. **Requirements Gathering / Definition**
7. **Collaborative Proposal Preparation**
8. **Strategic Planning Workshops**
9. **Collaborative Event Debriefing / Lessons Learned Sessions**
10. **Generate a Mission Statement in Two Hours**
11. **SWOT Analysis – (Strengths, Weaknesses, Opportunities, Threats)**

# Using Collaborative Technology to Streamline PMI Processes

## Questions?



**Brice Marsh, SAIC/TTT**

***Collaborative Software for High Performance Teams***