Problem Solving as a Process

Bob Berry

President & CEO

DPS Telecom

The Goal:

- Teach staff better problem-solving skills

- Better decision-making process

- Make results more predictable—in terms of outcome and timeline

Tools for Problem Solving

The Result:

- Too much information and staff not clear on how to apply these tools to their jobs

- Biggest impact came from just a few of the tools
  - Whiteboard sessions
  - DPS notebook
  - Trigger phrases/common vocabulary

- Culture was changed by teaching staff that results can be planned, monitored, analyzed and *ACTED* on

Lessons Learned

- Impact your culture by teaching people how to *"think"* while working.

- Only give people tools they can use **right now**.

- Culture and vocabulary are closely related

- Repetition and Measurement is the only way to get *BIG* and *LASTING* results

Skill Mastery

Skill Level

Training *Training* *Training*

Initial
Skill
Level

Time
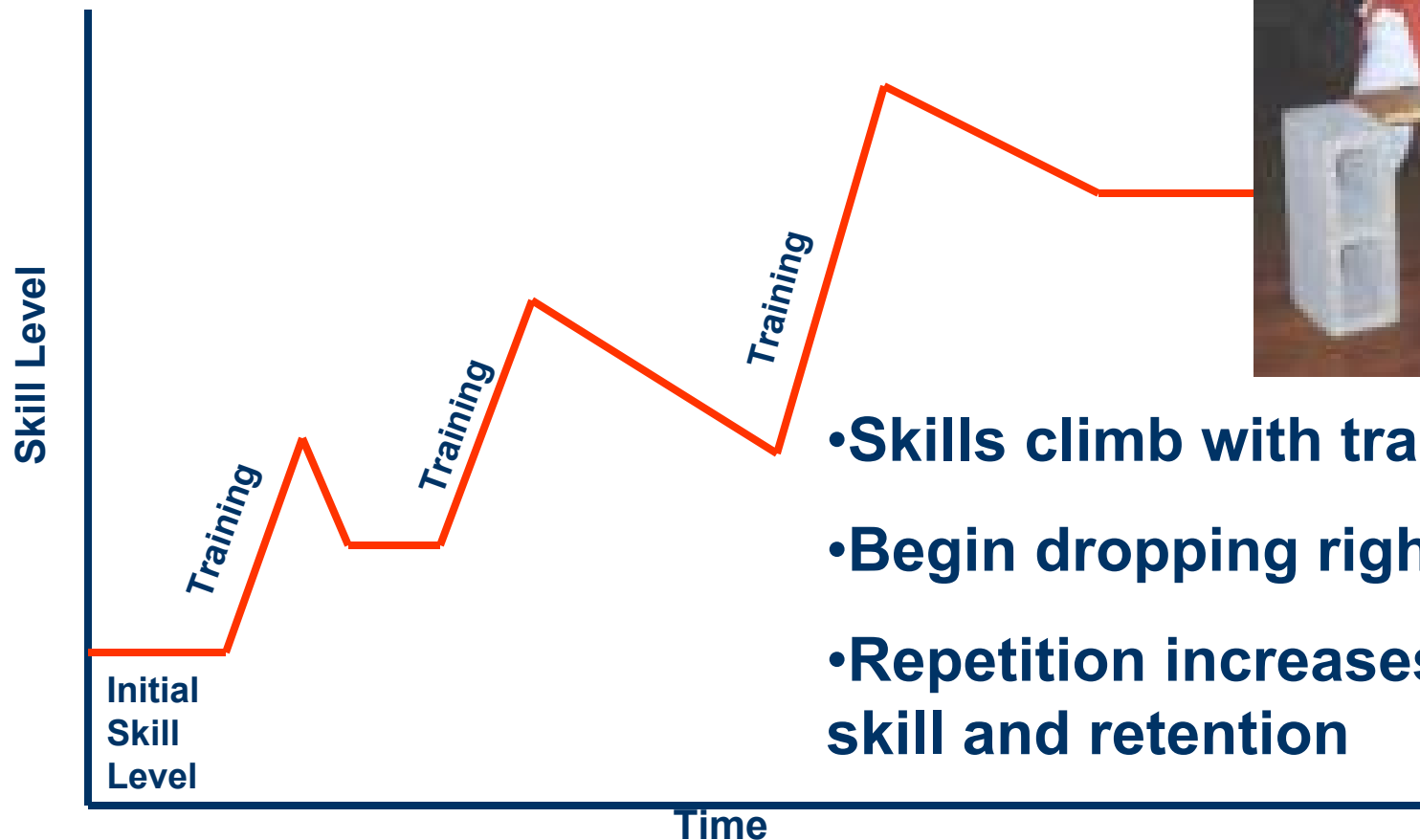
- **Skills climb with training**
- **Begin dropping right away**
- **Repetition increases both skill and retention**

The 3 Power Tools (DPS tool box)

1. **Whiteboard sessions** to facilitate group problem solving and brainstorming

2. **DPS Notebook** was standardized so that everybody followed a common process and could learn from each others' successes

3. **Trigger phrases** and a **common vocabulary** to encourage breakthrough thinking and combat bad assumptions
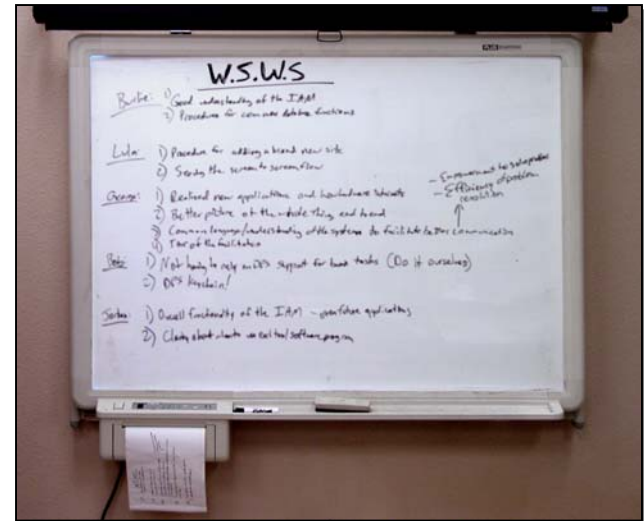
The Greatest GROUP thinking Tool Ever!
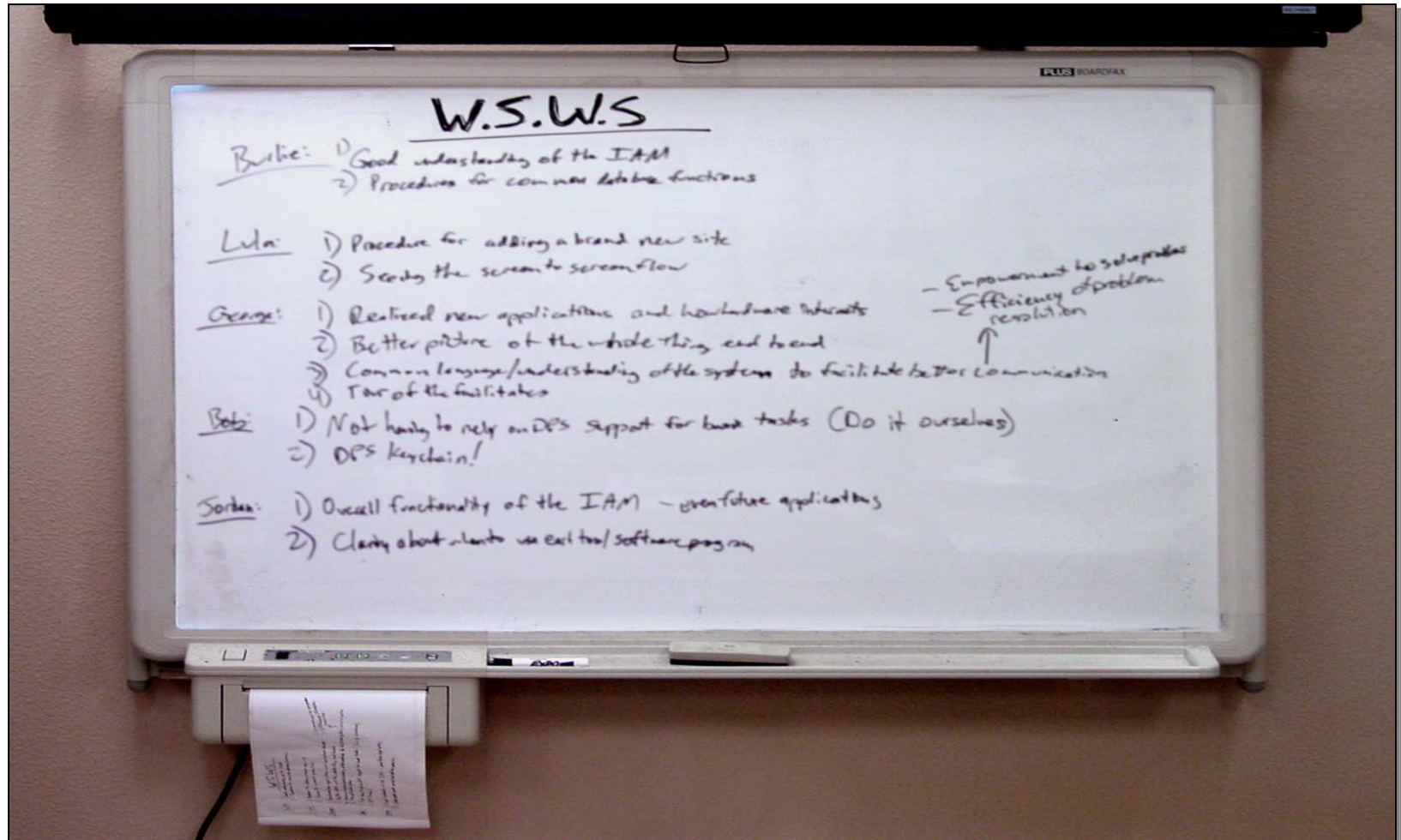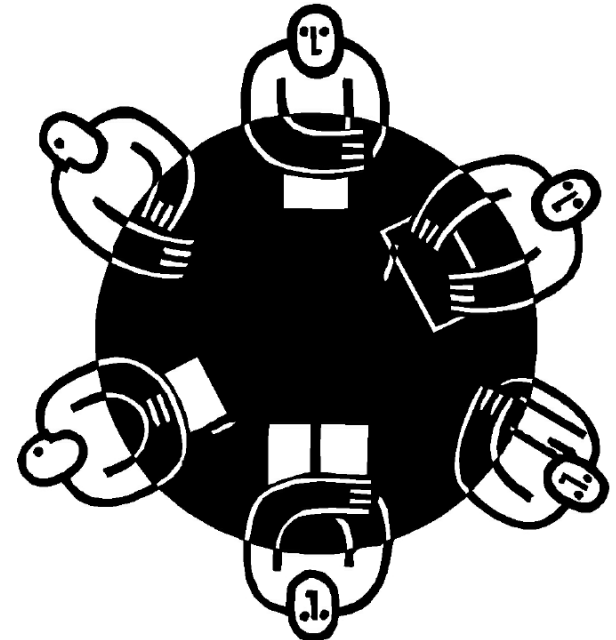
Whiteboard Sessions

Used for:

– What Sucks Work Shops (problem identification)

– Problem solving

– Continuous improvement

– Breakthroughs

– Brainstorming

– Project management

– Involvement creates **"buy-in"**

**All conclusions and decisions are immediately printable**

Whiteboard Sessions

- A predictable process:
  1. The host controls direction
  2. Pose a specific problem
  3. Give 2 minutes for everyone to **write** 3 or 4 ideas on the topic in their notebook
  4. Go around the table, getting 1 idea from each person per round.
 5. Ask questions to help clarify the ideas and focus them on the topic

Whiteboard Sessions

6. Keep everyone on topic—no soapboxes, no side conversations

7. **You control the pen!** As you write, focus each idea on the topic

8. Do final lightning round for remaining ideas

9. After all ideas are collected, prioritize by vote. Each person votes on best 3 ideas

10. Best idea gets 3 points; next gets 2 points; final gets 1 point.

10

© 2004 DPS Telecom
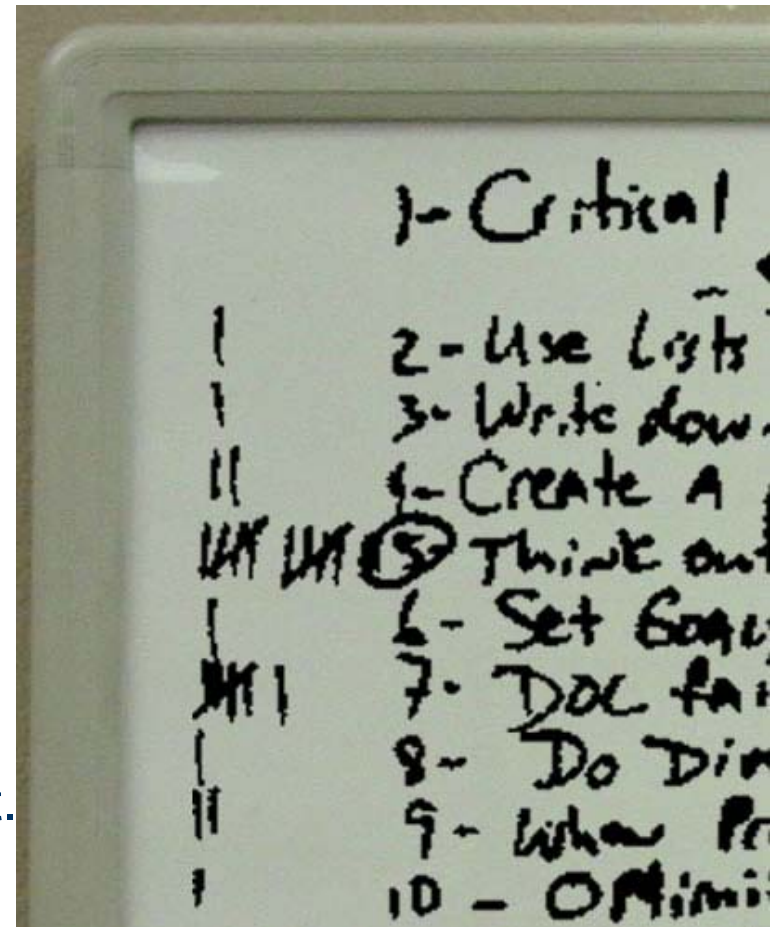
Whiteboard Sessions

11. Drill down if necessary on top ideas to get actionable plans.

12. Print out all the voting results for everybody to take with them

13. At the end of the session, ask participants to record their 3 big take-away ideas in writing

14. Put a copy of the printouts in a manila folder—instant knowledge base

15. The session is NOT COMPLETE until an action plan is printed
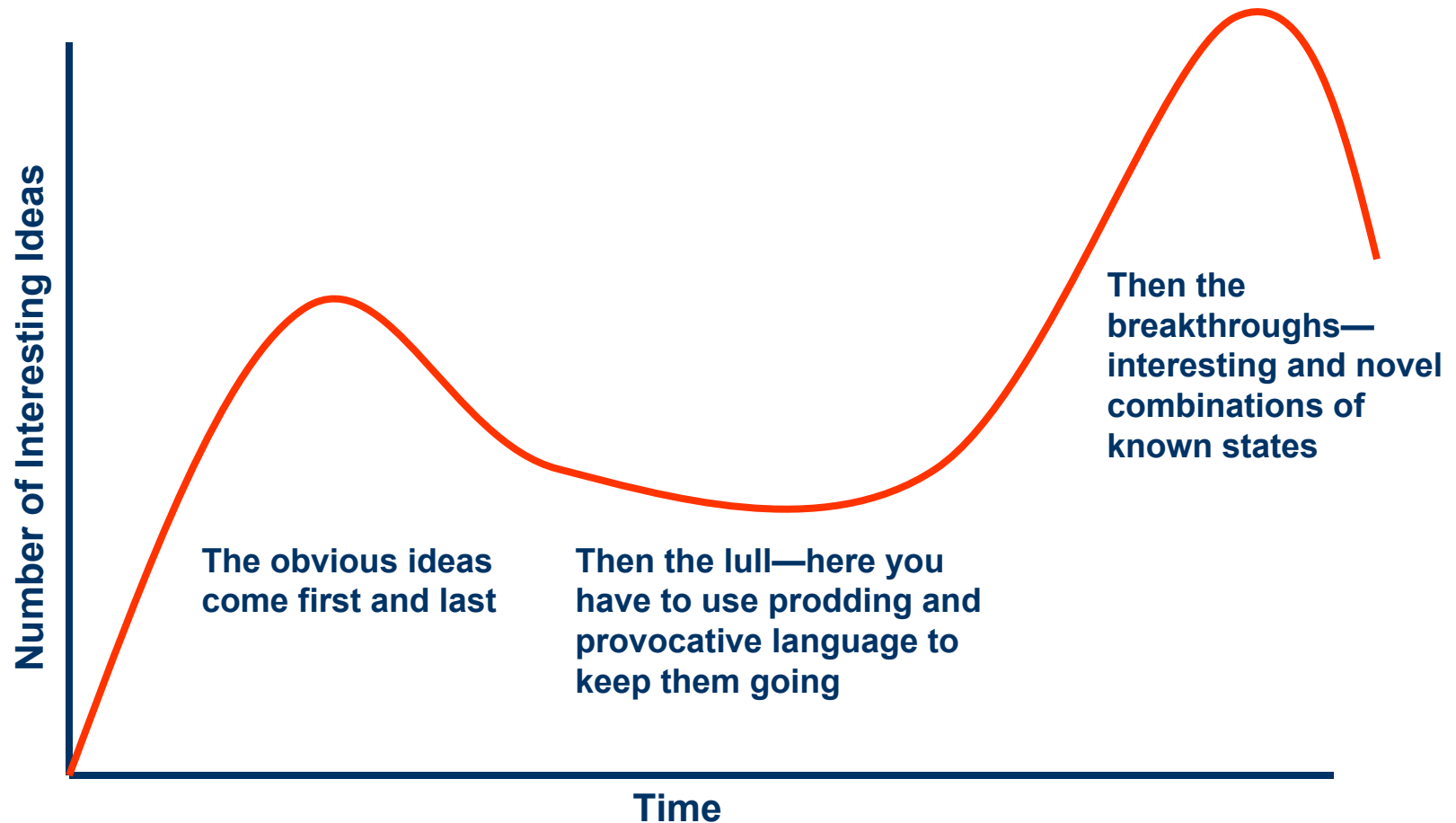

11
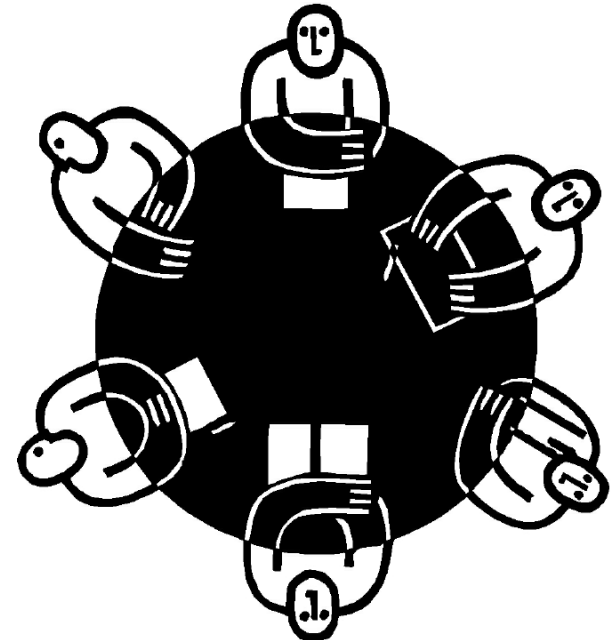
Whiteboard Sessions

- Encourage divergent thinking
  - Get **LOTS** of ideas without criticism or censorship
  - Don't rest until you've explored every possible solution—even the silly ones
  - You'll hit a "no-idea" wall— keep at it because the best ideas are on the other side.

Whiteboard Sessions

Number of Interesting Ideas (vertical axis)

Time (horizontal axis)

The obvious ideas come first and last

Then the lull—here you have to use prodding and provocative language to keep them going

Then the breakthroughs—interesting and novel combinations of known states

Whiteboard Sessions

- Use **_"trigger phrases"_** that reduce bias and minimize the impact of bad assumptions
  - The 1st idea sucks the most
  - If that was made illegal, what would you do instead?
  - That sounds like Fuzzy Thinking— give me specifics
  - What facts do you base that on?
  - Assume that was possible, what would happen?

The 1st idea sucks the most

Whiteboard Sessions

My favorite trigger phrase

"If I put a gun to your head …"

- give me 2 more ideas
- how would you solve that?
- what's the 1st thing that's going to go wrong?
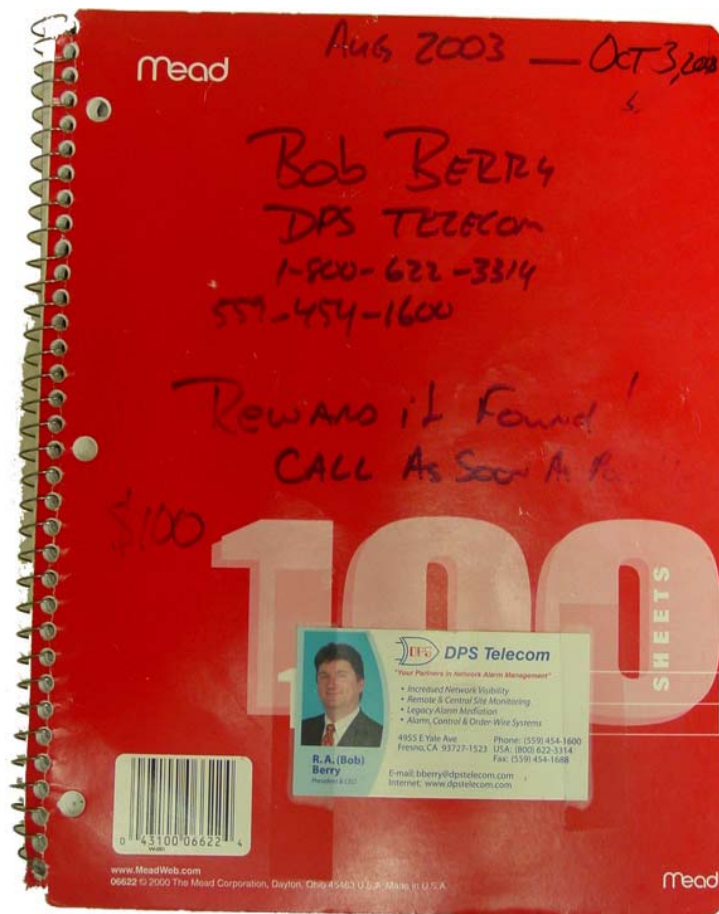- what are we missing?

Whiteboard Sessions

- Use convergent thinking for take-away
  - Vote on best impact **or** least impact—sometimes it's easier to identify the worst or least impactful choice
  - Ask participants to identify their top 3 take-always in writing.

# The Greatest PERSONAL Thinking Tool Ever!

The DPS Notebook

- Everyone is taught the "basic" DPS Notebook formula
  - Name, phone number and start date on front cover and back cover
  - Number the odd pages (lower right-hand corner)
  - 3 pages in the front for an index
  - Write everything in the notebook
    - Meeting notes, assignments
    - To do lists
    - Problems, solutions, and ideas
  - Everyone has to bring their notebook to all meetings
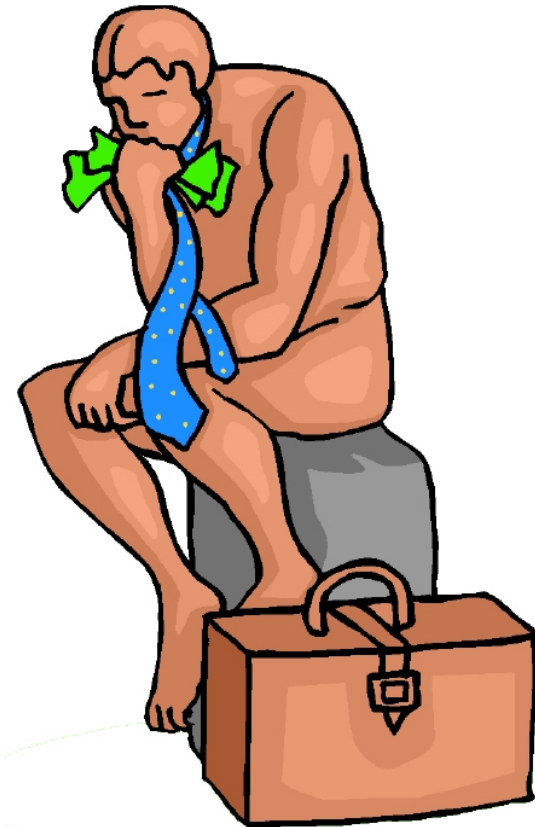
The DPS Notebook

- **Daily To Dos**
  - Develop a day ahead of time, if possible
  - Prioritize your list - do the most important things first
  - No priority list means the important stuff won't get done
  - Review To Do list at the start of the day
- **Attach monthly calendar to back cover of notebook**

19
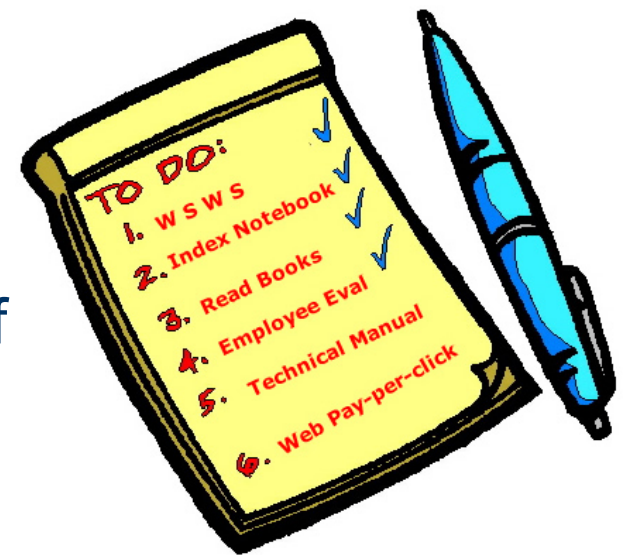
The DPS Notebook

Creative thinking and breakthroughs

- Describe the problem or solution you want
- Restate the problem as many ways as you can
- Describe the "solution effect" in as many different ways as you can
- List as many solutions as you can
- Finally, prioritize and rank your solutions
- Now you're ready for a whiteboard session

20

The DPS Notebook

- ● Record meetings
  - – Capture the problems and big ideas
  - – Don't waste time copying whiteboards—Just get a copy and tape into your notebook
  - – Record action items and due dates

21

The DPS Notebook

- ● Track best practices and keep notes of what does and does **not** work
  - – Don't capture notes on random slips of paper
  - – Record the date
  - – Write for the future—is this going to make sense 6 months from now?
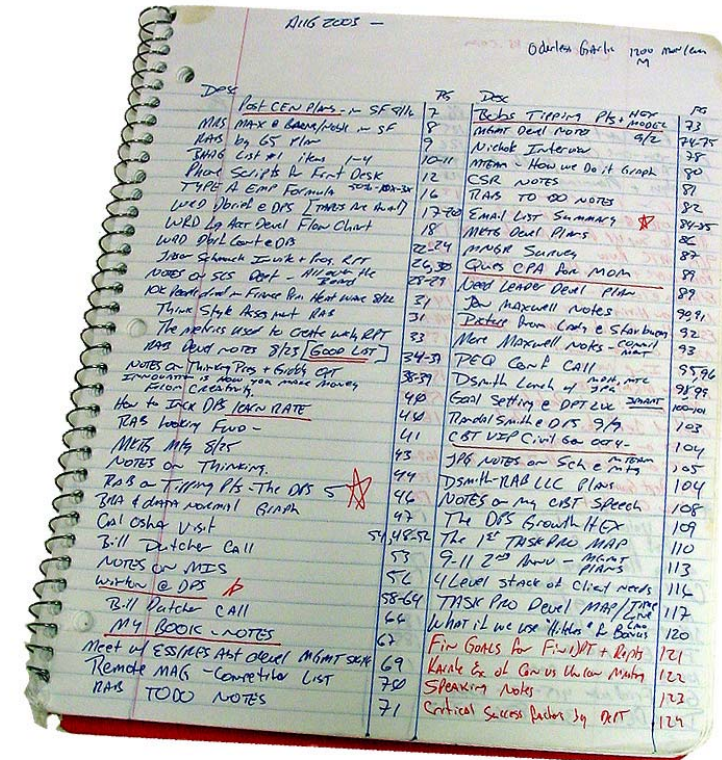
Aug 10, 2004

Project Name

10AM -to-11AM

22

The DPS Notebook

- ● **Maintain Index**
  - – Index pages weekly
  - – Use different colored pens to augment, update or refresh entries
  - – Index should be a pointer to Big Ideas, Breakthroughs and Events
  - – NOT a table of contents
  - – Great tool to revisit ideas/problems from another perspective,

The DPS Notebook

- Recording best practices

"I use the DPS notebook to write procedures for recurring problems as I'm working them out. I record the steps I took and the pitfalls to avoid. You can easily flip to that page and recall the procedure when it's needed"

**Mark Carberry
Engineering Manager**

www.dpstelecom.com

© 2004 DPS Telecom

The DPS Notebook

- Reference

"The DPS Notebook keeps my goals set straight. It reminds me of what I need to do, and what I need from other people. It's also a great reference to go back and review what you've done."
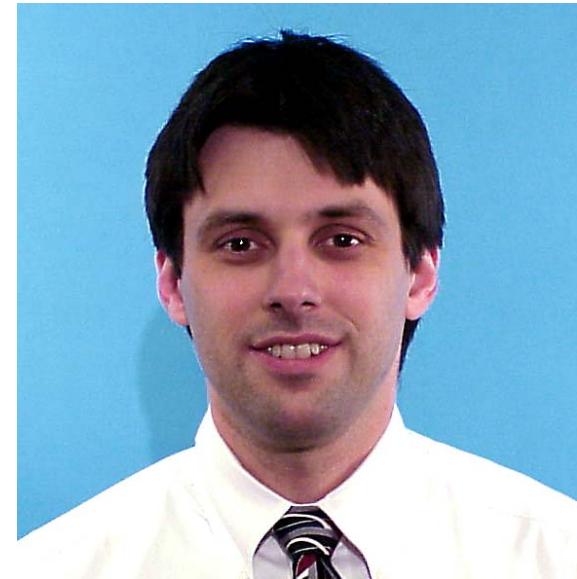

Annette Rinehart
Production Manager

25

The DPS Notebook

●Problem Solving

"The DPS Notebook has definitely helped me in thinking. It helps clarify your thoughts. Sometimes just working through the problem on paper helps you solve it."

**Ron Stover
Project Manager**

Trigger Phrases—Common Vocabulary

- Frequently used "trigger phrases" keep people from feeling personally attacked

- Because we use the same ideas and the same words, everyone knows what to do

- Phrases designed to be slightly shocking to change people's states of mind

DPS Telecom Dictionary
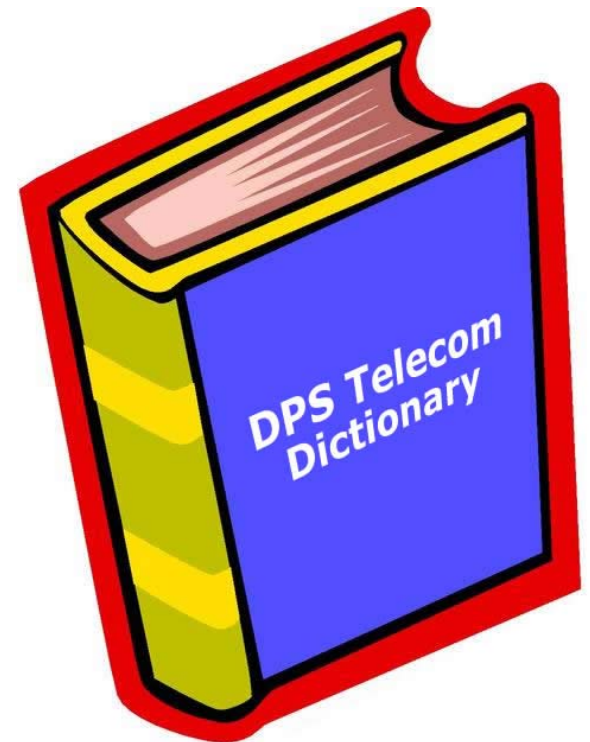
Trigger Phrases—Common Vocabulary

- Fail fast
- What Sucks Work Shop
- White Board Session
- "So what?"
- That's Fuzzy Thinking—restate that with specifics
- How would you measure that?
- Write that down in your notebook

- Minimize suckiness
- Give me a lot of ideas
- BHAG—Big Hairy Audacious Goal
- What would perfect look like?
- *Empowered Optimism—Expect to Win*

28

Trigger Phrases—Common Vocabulary

- The 1st idea sucks the most, the next idea sucks 2nd most

- Draw a picture

- If I hold a gun to your head and say "Give me two more ideas," what would they be?

- Make it your fault—then you have power to fix it

- Never get to the end of your list—hold another brainstorming session

- Group Think

- If you can't use any of those ideas, what would your next 5 be?

- Iterative Improvement

- Magic or Art = Undefined Process

Trigger Phrases to Focus Conclusions

- Lessons Learned

- Biggest 3 Take-Aways

- How can we test this?

- What's the action plan?

- When can we meet again with data?

- If I was going to shoot you if you failed, what would your 1st 3 steps be?
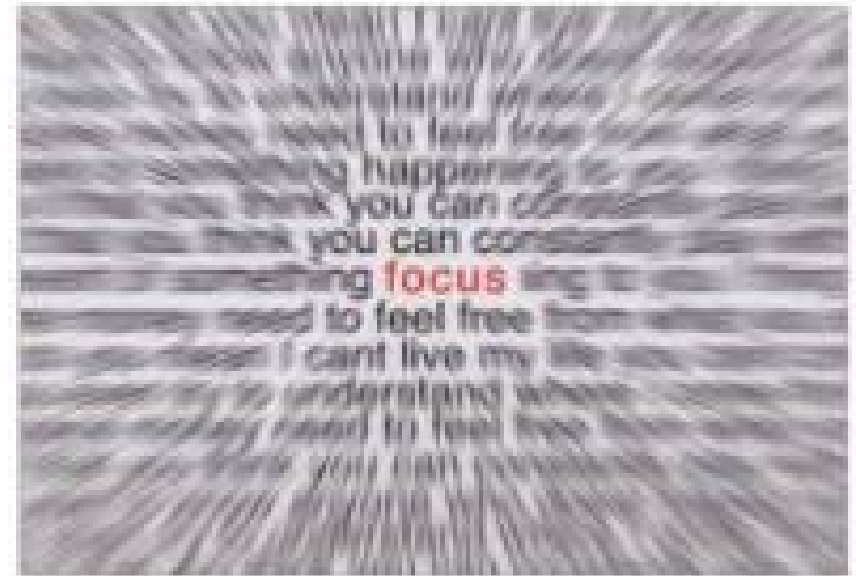
Personal Lessons Learned

- People need to master basic tools before advanced techniques

- This takes a time commitment

- You'll find more effort is spent solving problems instead of inventing excuses

- Keep going back to make sure the tools are being used often and properly

"He will win whose army is animated with the same spirit"

- Sun Tzu, Art of War

31

Q & A

- Resources:
  - Printable white boards: www.plus-america.com
  - Critical thinking and problem solving books:
    - The Thinker's Toolkit : 14 Powerful Techniques for Problem Solving
    - 101 Creative Problem Solving Techniques: The Handbook of New Ideas for Business
    - PhotoReading Whole Mind System

  - Email questions to:
    ## Bob@askBobBerry.com