COLLABORATION, INNOVATION and INTERACTIVITY

The Power of Simulation and Software Design!

Bill Dresselhaus, IDSA
Software Simulation Empowerment

Corporate BuzzWord Propaganda

Ease-of-Use  Total Quality
Customer-Based

INNOVATION

User Friendly
Core Competency
Out-of-the-Box
Six Sigma
Empowerment

COLLABORATION

Saying is NOT doing!!!!
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“We are implementing continuous improvement processes across our entire enterprise for promoting innovation and collaborative creativity as we increase productivity and customer quality with our integrated, cross-functional TQM, JIT, CRM and ERP teamwork for IT solutions.”

“Me design good product, Make money.”
THE REAL BUSINESS OF BUSINESS . . .

generating
ew ideas
and
turning them
into
need-filling,
wealth-building
products.
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More and Better IDEAS Everywhere

LOTS OF IDEAS

IDEAS
- Iterate
- Evaluate
- Eliminate
- Refine

CONCEPTS
- Iterate
- Evaluate
- Eliminate
- Refine

PROPOSALS
- Iterate
- Evaluate
- Eliminate
- Refine

PRODUCTS

REVENUE PRODUCTS
FILLING CUSTOMER NEEDS

CYCLE
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DESIGN and BUSINESS are Inseparable
DESIGN Affects Everything!
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Products MUST Meet Customer Needs and Wants
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DESIGN AS THE UNIVERSAL PROBLEM-SOLVING PROCESS

1. Concept
2. Detail
3. Engineering
4. Validation
5. Manufacturing
6. Production
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Characteristic of Design and Designers
SIMULATION: JUST WHAT IS IT?

Simulation:
The representation, reproduction, demonstration or imitation of an idea, concept, object or process using some form of communication media.
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Simple Freehand “Napkin” Sketches
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Simple Freehand Diagrams
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Posted Sticky Notes
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Simple Foam Blocks
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Toys As Concept Elements and Parts
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Dramatization, Role-Playing, Directed Fantasy, Scenario Building
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WHY THE KEY TO COLLABORATION AND INNOVATION?

- Shared Mental Space
- Common Imagery
- Uniform Perception
- Similar Experience
- Same reference point
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S(t)imulate to Innovate Sequence

Ideate  Simulate  Stimulate  Collaborate  Innovate  Profit
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Verbally-Based Communication

Marketing/Sales
Finance/Operations
Design/Engineering
Senior Management
Manufacturing

DATA
INFO
WORDS
NUMBERS

Talk
Talk
Talk

E-mail
Report
Proposal

Data
Results
Status

IDEA COMMUNICATOR

The Hazards of Only Telling a Story

The Circle of Confusion
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Right-Left Brain Theory

**LEFT BRAIN BIASED ATTRIBUTES**
- Controls right side of body
- Verbal
- Analytical
- Abstract
- Two dimensional
- Objective
- Logical
- Rational
- Factual
- Quantitative

**RIGHT BRAIN BIASED ATTRIBUTES**
- Controls left side of body
  - Visual
  - Intuitive
  - Concrete
  - Three dimensional
  - Subjective
  - Emotional
  - Irrational
  - Intuitive
  - Qualitative

Ideal whole-brained "ambidextrous" thinking

Left-brained biased "right-handed" thinking

Right-brained biased "left-handed" thinking
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Verbal/Numeric-Based Input

WORDS IN

WORDS OUT

IMAGERY
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Simulation/Sensory-Based Input
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Human Sensory Bandwidth

- Verbal
- Visual
- Tactile
- Kinesthetic
- Aural
- Taste/ Olfactory

SENSORIZE!!
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Simulation-Based Communication
EXTERNALIZED THINKING
The ultimate out-of-your-mind experience!
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Simulation Media
Software Simulation Empowerment

Simulation Tools
Software Simulation Empowerment

Collaborative Options Developed
THE RESULT

- Five viable product configuration solutions
- Everyone involved and having participated
- Consensus and collaboration on all solutions
- Validation by all essential functional groups
- No confusion over perceptions or concepts
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Beyond Strategy

TACTICS

TOOLS

TALENT
INGREDIENTS

- **TACTIC:** Dedicated Simulation Laboratory
- **TOOL:** Appropriate Simulation Media
- **TALENT:** Champion Simulation Specialist
SIMULATION LABORATORY: INTERACTION AND EXPOSURE

- A place for process and meeting of minds
- Collection of shared and common experiences
- Open to all departments and functions
- A sensory and experiential extravaganza
- A display of what your business is all about
SIMULATION MEDIA:
SENSORIZATION TOOLS

- Electronic whiteboards
- Storyboards and tack boards
- Technology maps and product roadmaps
- Company product samples (real and virtual)
- Samples of the competition (real and virtual)
- Digital design workstation with resources and Internet access with projection
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SIMULATION SPECIALIST: FACILITATOR/CHAMPION OF THE PROCESS

- Industrial Designers
- Software Designers
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Simulation Culture

- Design/Engineering
- Physical
- Digital
- Shared Space
- Management/Customer
- Finance/Business
- Marketing/Sales
- Operations/Manufacturing
SIMULATION SIDE EFFECT

SIMULATE to:
- Intimidate
- Irritate
- Aggravate
- Violate
- Frustrate
SIMULATION SPELLS DISASTER FOR:

- Sacred Cows
- Pet Ideas
- Management Taboos
- Corporate Schemes
SIMULATION’S GREATEST VALUE IS NOT IN MERE REPRESENTATION!

• Collaboration
• Surprise
• Serendipity
• Invention
• New ideas
• Innovation
• IT CHANGES THINGS!
Have Fun, Make Money, Change the World!