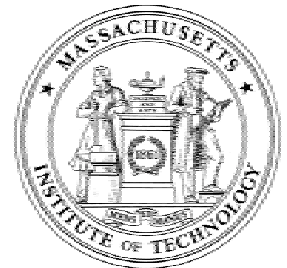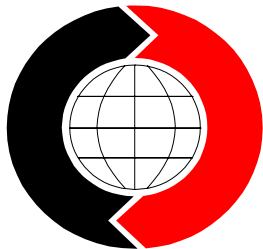# *ISCM Plans for 2002*

February 6, 2002

James B. Rice, Jr.

Director - Integrated Supply Chain Management Program

Massachusetts Institute of Technology

Feb. 5 Summary

- List choices for 2002
  - ISCM Vision, Long-term plan
  - Research agenda, plans, focus
  - Event plan
  - Program structure, operations
  - Deployment of Director
- ISCM
  - This is your program, make it what you want it
  - Exponential benefits for those who expend energy

Agenda

- Feedback on Media Lab demos – applications?
  - Sensetable
  - Senseboard
  - Traveling data
  - Clay
- CLV
- ISCM planning
  - Harvesting
  - Vision
  - Decison making
- Wise abuse of SC Power

Media Lab Feedback – Applications

- What applications can you think of for …..
  - Sensetable
    - SC Visualization – multiple locations desirable, phys feedback motor actuated slides powerful in training of management to communicate the relationships between activities, important to develop the algorithms with real business and make the model assumptions/algorithms visible so that users will deem the model and its assumptions;
    - consider use of SCV as a control device for the system rather than just simulating (this is good stuff) and build in feedback so that the assumptions are updated/corrected if the initial or existing model assumptions are not accurate or reflective of actual SC performance,
    - consider using sensetable SCV as inventory mgt tool providing an output to the senseboard which may be operating as a capacity planner for the system
    - Procurement application – specific SC case of JIT system, kan ban cards and the procurement of materials…. Dynamic kan ban with ability to rapidly change multiple factors

Media Lab Feedback – Applications

- Senseboard
  - Order entry requirements – using P&G , Helix
  - Scheduling – capacity planning in some environments use white boards and single location, manual list, human analysis to manage use and allocation of mfg capacity, senseboard could be used to replace the process and allow way to capture electronically and automatically avoid/highlight constraints
  - Scheduling – dock door mgt, dispatch coordination, distribution facility operation and factory inbounds-outbounds mgt – currently dispatcher single-handedly coordinates
  - Medical applications – scheduling patients and required processes (linked, relationship-dependent processes (pre-requisites)) that also need to be optimized, currently manually done with a white board
  - Medical application – coordination of tools, patient records, human resources to meet desired schedule

Media Lab Feedback – Applications

- Porta-Data (traveling data), Data-brick
  - Collaboration with other parties, imagine different companies coming together with their own data-bricks to use on the SCV table, make decisions and then take their data back after using in the context of the other parties' data (with SC Vis)
  - Medical application – imagine the patient who could carry their own personal data to be used at various medical procedures of patient's choice (personal data only used for their selected uses)
  - Cash-, debit-card replacement… an RF debit card where the data-brick is a mobile repository of value with Serve as a transaction Speed-pass application
- Clay
  - Replacement of or supplement to VFR (visual flight rules), useful to quickly 'seeing' upcoming landscape when it is not possible physically
  - Potential application to automotive use in sensing topography and surrounding conditions
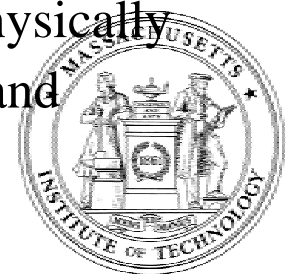
Harvesting: Framing the Problem – Mtg Comments

- Want to change the way that Intel does business based on what we learn here (from the research and events)
  - Have had to 'go underground' to do the work w/o BU support, but the results not supported
- How can we get the results embedded into the company where it works?
  - Recognize that the research can create some ideas that are part of an evolution (JR)
  - Have Charlie do a Clockspeed session to lead the change (JB)
  - Create a 'Strategy to action' team that studies and plans how to move good ideas into execution (JK)
  - Identify the purpose and objectives of the research, use that to drive how that is built into the business (JK)
  - Success that MMH created at Intel was by enlisting support from non-SBU personnel (JK)
  - Corporate leads with investment, provide incentives ($, resources) for SBUs to adopt it (BS)… 'resource sharing'
  - Corporate maintains some standard processes and expectations that should be followed by SBUs, if not penalties are assessed (JB)
  - Researchers show up on site (BS)
  - Engage the SBUs by giving them input to direction-setting, provide corporate resources that are made available to SBUs to utilize the research… (BS, RM)
  - Obstacles – no single business owner, there are many parties involved, research not involved with 'today's solution'
  - FU – set up a concall with ISCM sponsors to further this discussion, probably 4 wks, should look into technology transfer domain for useful learnings

ISCM Issue – Harvesting

- Known practices for harvesting research findings
  - MIT
  - Sponsors
- Known practices for harvesting event findings
  - MIT
  - Sponsors
- New ways to consider harvesting findings
  - Webex?

ISCM Long Term Plan – Mtg Comments

- Sponsor composition
  - Need critical mass of participants
  - 8-10 participants seem to be the right number
  - Enlist 'leaders of SC'….. Such as GE
    - Agreed to have each sponsor identify companies and key contacts of prospects, noted that it is best if the sponsor can make the first contact to introduce ISCM as a possibility for the prospect to consider
  - One possibility - enlist members that are part of our supply networks?
    - Too scary to have customers and suppliers together?
    - Select a customer and/or supplier as part of the program? Involve customers and suppliers in a project instead of participating? Do so on a case-by-case basis…. It provides benefits to both parties.
    - Agreed to leave this up to the individual companies, whether to focus on engaging with a specific customer or supplier and encourage them to join
- Useful to have a multi-year rolling road-map that paints a picture of where the group will go
  - Agreed to fund year-to-year but with an 'emotional' commitment for a longer period of time (it is difficult to fund multiple years)
  - Make multi-year research funding decisions
  - BUT we need a critical mass of sponsors to do this….

ISCM Issue – Program Structure and Size

- Program Structure and Size
  - Currently reaching lower limit on number of sponsors
  - Event participation limit of effectiveness (30-35)
  - Limited membership & low cost limits research funds available
  - Annual funding requires 'rework' effort, limits ability to make research commitments for longer-term projects
    - Although it is useful to review progress
- Considerations
  - Multiple-year sponsorship agreement
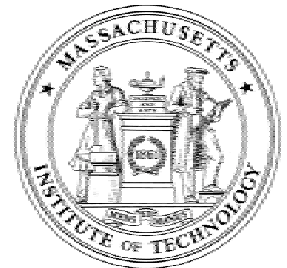 - Enlist sponsors in recruiting efforts
- Discussion

Planning Implications

- Limited investment decision for now
  - Deployment of Director
  - Assess and develop research alternatives
- Assess funding sources
  - $40K annual sponsor fee
  - Additional sponsors
- Current sponsor role in recruiting

Planning Implications

- Investment decision for now

- Assess funding sources
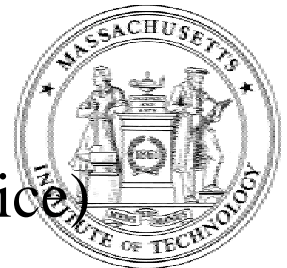
- Current sponsor role in recruiting

2002 Research Agenda Draft

- Continue 2001 research projects into 2002
  - CLV
  - Clockspeed
  - SC Visualization access
- One new project
  - Monsanto Seed Returns – Demand Bubbles
- Other projects if warranted by interest and if funding available
  - Projects for Director
  - Projects for other researchers

2002 Research Alternatives

- Projects to consider
  - Auto-ID Technology & SCM – A Disruptive Technology (Rice)
  - Impact of Global Terrorism on SCM (Sheffi)
  - Market Power and the Supply Chain (Hines, Rice)
  - CLV – Monsanto (Rice)
  - Collaborative contracts and managing risk in the SC (Sheffi Graves, Rice)
  - Alternatives for SCM Resource Allocation (Malone, Hines, McAdams, Rice)
  - Defining the Essence of Third Party Logistics (Papadopoulou)
  - Organizing for Collaboration (Rice)
  - Quantifying the SC Vis model for linked benefits (Rice)

- Auto-ID Technology & SCM – A Disruptive Technology (Rice)

- Wise Abuse of Power in the Supply Chain (Hines, Rice)

- CLV – Monsanto (Rice)

- Organization Dynamics for Internal Collaboration (Rice)

Research Alternatives – External Investments Required

- Impact of Global Terrorism on SCM (Sheffi)

- Collaborative contracts and managing risk in the SC (Sheffi, Graves)

- Alternatives for SCM Resource Allocation (Malone, Hines, McAdams, Rice)

- Defining the Essence of Third Party Logistics (Papadopoulou)

- Quantifying the SC Vis model for linked benefits (Malone, Hines, Ishii, Rice)

Internal Grid – Sponsor Preferences

Researcher	Project	Resource Reqts (est)	Sponsor Pref
Rice with Auto-ID Center	Auto-ID Technology & SCM – A Disruptive Technology	Funding for student?	T
Rice with Hines	Wise Abuse of Power in the Supply Chain	Access, funds (Hines' times)	L I H T
Rice	CLV – Monsanto Case	Ltd travel, funding for student (Monsanto?)	M M?
Rice	Organization Dynamics for Internal Collaboration or HOW to HARVEST	Input, funding for student	L I H

External Grid - Sponsor Preferences

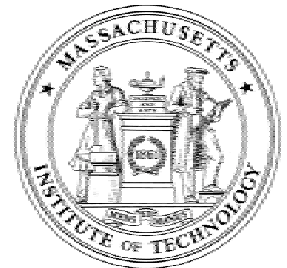| Researcher	Project	Est Resource Reqts	Sponsor Pref
Sheffi	Impact of Global Terrorism on SCM	Access, funds	L L (access?) I (access?)
Sheffi, Graves	Collaborative contracts and managing risk in the SC	Access & funds	H (access)
Malone, McAdams, Hines, Rice	Alternatives for SCM Resource Allocation	?	
Papadopoulou	Defining the Essence of Third Party Logistics	Access, limited funds	
Malone, Hines, Ishii, Rice	Quantifying the SC Vis model for linked benefits	? Funds, data, Rice as resource	I H T T

Net Grid - Sponsor Preferences

Researcher	Project	Est Resource Reqts	Sponsor Pref
Sheffi	Impact of Global Terrorism on SCM	Access, funds	L L (access?) I (access?)
Rice with Hines	Wise Abuse of Power in the Supply Chain	Access, funds (Hines' times)	L I H T
Rice	Organization Dynamics for Internal Collaboration or HOW to HARVEST	Input, funding for student	L I H
Malone, Hines, Ishii, Rice	Quantifying the SC Vis model for linked benefits	? Funds, data, Rice as resource	I H T T

- JR to go to Wise Abuse team and explore how ISCM can participate in research…
- JR to go to Yossi and explore how we can support, authority to invest up to $40K, will hold additional investments off until additional funding is received….
- JR to go to SCV team and explore how ISCM can participate
- JR to go to Yossi and offer Helix as potential site for Collab contracts study

2002 Research Agenda Draft

- Continue 2001 research projects into 2002
  - Clockspeed, SC Visualization access
- One new project
  - Monsanto Seed Returns – Demand Bubbles
- Other projects as possible per the Net Grid
  - Impact of Global Terrorism on SCM (Sheffi)
  - Wise Abuse of Power in the SC (Hines, Rice)
  - Quantifying the SC Vis Model (Malone, Hines, Ishii, Rice)
  - Organizational Dynamics for Internal Collaboration (Rice)
  - Projects for Director
  - Projects for other researchers

2002 Event Plan – Mtg Notes

- Keep May 21-22 as core exchange meeting
  - Consider shifting exchange meeting to June if we can establish a Transentric Clockspeed session
- Keep October dates as core exchange meeting
  - Consider holding meeting in Chandler with Intel as host, attempt to coordinate a Clockspeed session
- Dates
  - 1Q
    - February 5-6 Planning Meeting & Research Review at MIT
  - 2Q
    - May 21-22 Exchange Meeting at MIT
    - June Clockspeed Meeting – possibly hosted by Transentric (St. Louis, Mo)
  - 3Q
    - Oct. 15-16 Exchange Meeting – possibly hosted by Intel (Chandler, Az)
  - 4Q
    - Dec. 3-4 Planning Meeting at MIT

2002 Support Plan

- 1Q
  - AudioConference – Harvesting Discussion
  - Late March, 11:00 am – 1:00 pm?
- 2Q
  - April 9 ILP Research Directors Conference (option)
  - AudioConference 11:00 am – 1:00 pm?
  - Topic or Speaker?
- 3Q
  - AudioConference 11:00 am – 1:00 pm?
  - Topic or Speaker?
- 4Q
  - AudioConference 11:00 am – 1:00 pm?
  - Topic or Speaker?

Summary

- 2001 Review- exposure to our research and hopefully useful ideas
  - SC Visualization, Network Master, CLV
- Guidance for 2002
  - Event plans – we started this
  - Research agenda guidance – choices made
  - Deployment of Director – choices made
- Follow ups
  - Set conference call to finish discussion on 'harvesting'
  - Finish planning events and interactions
  - Explore research options (per Net grid)
  - Sponsors – help with recruiting & building program