

THE TOC Times

The Avraham Y. Goldratt Institute

TOC World Summary Edition

In This Issue

- ▶ *Thoughts from the Executive Panel Discussion*
A Better Understanding of Decision Making: Finance & Measurements
Great Developments in Strategy to Tactics
- ▶ *A sampling of Client Presentations: Seagate Technologies & General Motors*
- ▶ *JEMBA 2000 Symposium*
The 1st Annual Defense Summit

Mark Your Calendars!!!

TOC World 2001
June 19-22

TOC World 2002
June 25-29

"Excellent networking opportunity"

Evaluation form of a TOC World participant



Special TOC World Edition!!

TOC World was a great success, with over 400 registrants representing 23 different countries and over 175 different companies and organizations! This includes top executives from companies such as Johnstech International, 3M Company, DaimlerChrysler, The Boeing Company, and Mercruiser, to name a few.

Following welcome remarks by Dale, the conference started off with a bang on Tuesday morning with a well-received keynote by Eli on the topic of MRP and e-business. Eli announced that his new book, covering this same topic, will be available in the October/November time frame. A few attendees even received early transcripts!

Corporate presentations were held throughout each day, and for those of you that missed the event, or were taking advantage of the many educational sessions held, these and other main room presentations will be available to purchase on videotape, via the AGI website.

The TP Re-Certification session, although initially not drawing much interest in advance of the conference, packed the room with Jonahs looking to be updated in the TP skills. Executive Director Bill McClelland facilitated the session, and those that attended will be sent the new TP Field Guide. Packed rooms were the norm for the conference, with standing room only in sessions by Oded Cohen, Dale Houle and Hugh Cole. Jonahs and non-Jonahs alike were craving as much information on TOC as they could get!

Everyone relaxed and networked at the Welcome Reception, where an ice carving of the new AGI logo was displayed. What has become an AGI staple, the conference raffle gave away more prizes than in the past, and the winner of the Grand Prize – a complimentary Jonah Program – was Michael Trilling of Raytheon/Adam Opel AG in Germany. Other winners included Tony Cardella, AGI Associate from Texas, who won a Goal Videotape; Frank Patrick, AGI Associate from New Jersey, who won an AGI logo hat, Rex Draman, Academic Associate from Texas, and Virginia Thompson, licensee from the state of Virginia, also winning hats respectively.

The AGI network was in fine display during the conference in their oxford shirt regalia, featuring the new AGI logo. There were some sizing and color issues due to some vendor supply problems, but most everyone made the best of the situation, and traded shirts around to get the best potential wardrobe!

The Executive Panel Discussion moderated by Eli, and informative educational sessions, were additional highlights of the week. Howard Meeks, AGI Associate from Iowa, and John Saathoff, AGI Associate from Florida, are featured contributing writers to this month's special issue. Both will comment on some of the newest developments in this year's conference.

The schedule has been set for TOC World 2001 AND 2002 – so mark your calendars, plan your travel and join us again for this continuously expanding conference. These conferences serve as a way to meet new faces, visit with old friends, and continue on the learning curve with TOC.

Thoughts from the Executive Panel Discussion - by Howard Meeks

AGI Associate & contributing writer

The Executive Panel was composed of leaders from several TOC companies including: Robert Mendenhall, Director of Integrated Scheduling, BAE Systems, Neil Gallagher, President & General Manager of ITT Night Vision, Greg Sorum, President of Cartiva and Colonel Charles Griffin, Vice Commander of AFOTEC. The panel was moderated by Eli Goldratt. After overcoming some significant problems with the audio systems, things got rolling into a discussion of devising and deploying a TOC strategy.

There was one significant part of the discussion that stuck in my mind. Greg Sorum mentioned the concern with the effect of moving TOC trained people from an organization. The result was a less effective organization. This concern is something I have observed at various times and leads to the following questions. Do companies see this result and see TOC as merely the Hawthorn Effect (temporary improvement only)? Can we expect companies to continue to improve when the organization personnel change? Although we want the companies to be self-sufficient at the completion of an implementation, should we be the



A real international representation of the network!

providers of continuing education, i.e., periodic review for the long-term employees and training for the new employees? Is this a situation where MSW and/or the Jonah Program should be emphasized? Should we be having dedicated upgrades for companies that have a lot of transfers or changes in employment? These are thoughts of mine that came out of the executive panel, perhaps this is a point of discussion in future issues.

A videotape from the Executive Panel discussion is available to purchase. Visit the website for details.

A Better Understanding of Decision Making: Finance & Measurements

by John Saathoff - AGI Associate and contributing writer.

Decision Making: Finance and Measurements – Presented by Hugh Cole

This session examined the link between finance and measurements and how they are used to judge the actions and decisions managers make. This was done from the perspective of the finance department, which commonly acts as the scorekeeper of the organization. In the course of its efforts to improve results, an organization

often looks to Finance in judging (1) profitability of the system as a whole, (2) profit center performance, (3) investment and capital spending requests, (4) make/buy and outsourcing alternatives, and (5) product and service profitability. The decisions that are made may have huge ramifications for the organization, which is why users in the other

“New to the conference were lunch table discussion groups. Casually structured by title i.e.: “Sit here if you would like to dine with other marketing professionals” this was a great way to meet others with the same interest at the conference. One of my MBA students attended and felt it was a positive point in enhancing the conference experience. I hope they keep this up for future conferences.”

Howard Meeks

functions often complain about the lack of accuracy and timeliness of the data. A more fundamental problem is the distortions introduced by conventional financial analysis – based on full absorption accounting. The session provided a thorough and enlightening comparison of the cost allocation vs. throughput based approach to the above decisions. In particular, it demonstrated how cost allocation blocks proper actions and rewards actions that are wrong. Perhaps the greatest value delivered by this session was in expanding on key concepts from The Haystack Syndrome, and presenting them in a concise, logical, easily grasped three-hour package.

Great Developments in Strategy to Tactics – by John Saathoff - AGI Associate and contributing writer

Strategy to Tactics: Presented by Tracey Burton-Houle



Dale and Charlie compare shirt sizes.

To do justice to a topic of this scope in a three-hour session may have been the most ambitious objective of the conference. And it was achieved with mastery and enthusiasm. What was presented consists of a three-level integrated model for strategic planning. It brings together most of what we know about the function-specific applications of TOC, and demonstrates how to align them within a step-by-step process to develop and deploy the organization's strategy. The model's three levels include: (1) Corporate strategy – What businesses should we be in? (2) Business strategy – How should we compete in these businesses? and (3) Functional strategy – What actions support the business strategies? For a business unit, the operational strategy is comprised of its business strategies and functional strategies, with particular emphasis on the necessary changes in policies, measures and behaviors. By ensuring that the strategy satisfies the goal and necessary conditions of the organization, the process is held to a consistent, rigorous standard. Looking at the typical problems of individual functions together with current management behavior in dealing with the core conflict, it was clear that we're far from having "... little, if any, trouble conducting business". Which means that far too much time is spent "fixing" things and compensating for missed opportunities. The flip side is no one is "looking after the future". The core conflict of strategy is framed by the dilemma of short term performance vs. future growth. The significant contribution of the session was taking the direction of the solution – "The actions we take to achieve short term performance **pave the way** to achieving growth in the future" – and showing how the relevant management teams can be

"I ordered three videotapes – first time in all these years!"

Evaluation form of a TOC World participant

facilitated to have it through a TP based approach. In view of the limited time available to fully discuss the "how to's", this topic could well justify further development into a two-day workshop

A Sampling of Client Presentations

Seagate Technologies

Seagate is a global leader in the design and manufacture of information storage technology.

Brent King, Executive Director and Joan Motsinger, Director, of Seagate Technologies presented on the multi-project

management and PIPELINE Management deployments currently underway at 4 of their design centers (US and Singapore).

Joan and Brent described both the journey they've taken to date, as well as what is still on the horizon for them. Joan went into a specific example of the application of Critical Chain to her project, the *Cheetah X15 – 18LP*.

Seagate has (or has had) 13 projects operating under Critical Chain, with the *Cheetah X-15* project finishing 10% sooner than the scheduled lead time – which was even more of an improvement over the historical, *actual* completion time for similar projects. Missing a product launch by a single quarter has historically cost Seagate in the area of \$150 million in incremental revenue.

"The educational sessions made a huge difference for me. I feel like I am coming away with value for the money my company and I spent".

Evaluation form of a TOC World participant

General Motors - Finally!

In what can be considered a coup in the presentation arena, General Motors agreed to give not one but two presentations at TOC World 2000 describing the impressive results they've achieved over the years by utilizing TOC. GM is typically very conservative relative to their operations, but went into a great deal of detail, not only on how they've applied TOC (particularly within the area of their manufacturing environments) but also the very impressive results they've achieved.

JEMBA 2000 Symposium

This year's Joint AGI/University (Executive) MBA Symposium (JEMBA) was off to a start with a pre-symposium workshop on Sunday, July 16. The purpose of the pre-symposium workshop was to familiarize participants new to TOC with its

processes and applications, and transfer knowledge in the basic logic tools that underlie the Thinking Processes. Those attending the pre-symposium

workshop would have sufficient understanding of the material being presented throughout the symposium. The morning session started with *An Introduction to the Theory of Constraints*, by



Hanging out during a TOC World break!

Steve Simpliciano, Dean of the AGI Academy. The afternoon session featured Dr. Janice Cervený and Dr. Marjorie Cooper teaching the evaporating cloud and negative branch reservation, respectively.

This year's JEMBA faculty was **Dr. James Holt, P.E.**, from Washington State University at Vancouver (Operations); **Dr. Charlene Spoele, CPA, CMA,**

CFM, PMP, from Baylor University (Accounting and Finance); **Dr. Janice Cervený** from Florida Atlantic University (Project Management); **Dr. Marjorie Cooper** from Baylor University (Marketing); and **Dr. Rex Draman** from Saint Edwards University (Strategy). **Dr. Alan Leader** from Seattle University facilitated each day's Wrap-up Session. **Dr. Richard Peschke** from Minnesota State University, Moorhead facilitated the Roll-out Session on Day 5.

On Thursday, Eli spent an hour with the JEMBA Symposium participants. He commented that as a body of knowledge, TOC is not complete, and that developments should be placed in the public domain to facilitate its understanding and use. Eli said that academics should add to and improve the TOC body of knowledge through their research, but sternly

warned against distorting the simple and practical nature of TOC with optimization. When asked about Jonahs being somewhat dogmatic, Eli responded by saying, "That's only because they have

first-hand experience of what doesn't work in reality, and are quick to discard papers that are [further optimization of existing solutions.]"

Based upon the feedback from this year's JEMBA Symposium, especially from Dr. Vicky Mabin, an academic from New Zealand and Dr. Luis Henrique Rodrigues, an academic from Brazil, Steve Simpliciano took an action to provide continuing support for JEMBA attendees by: 1) providing a means for JEMBA attendees to share knowledge between AGI and themselves, and 2) providing a means by which academia can share their developments, as they move into new areas within the TOC body of knowledge based on their research.

The *Initiative for a Joint Avraham Y. Goldratt Institute/University (Executive) MBA Program Alliance* is geared for those universities, corporate and traditional, that have a desire to formally include TOC in their courses and curricula. Although entitled "Executive" MBA, the symposium equally applies to management in the areas of engineering, health care, and public administration, and extends to the arena of executive education.

The material delivered under the JEMBA is based on AGI material. However, under this initiative, the main thrust is on integrated delivery

of TOC-based management education by instructional staff and faculty. The key to integration understands management from a systems approach, with emphasis on relationships and processes based on TOC and its applications. To this end, the JEMBA faculty has spent the last 18 months developing the key integration pieces based on the relationship of corporate strategy to business and functional strategies. The JEMBA initiative was formally launched last year with the first symposium in New Haven, Connecticut.

The first JEMBA Symposium had participants from Hofstra University, Universidade Panamericana, Crowder College, and the Boeing Company. This year's JEMBA Symposium included participants from Mary Crest International (Illinois), Minghsin Institute of Technology (Taiwan), National Chiao Tung University (Taiwan), University of New Mexico, Saint Edwards University, Texas Technical University, University of Ulster (Ireland), Virginia Highland College, Victoria University of Wellington (New Zealand), Dana Corporation, and

Intel Corporation. A large contingent representing the Brazilian Institute for Quality and Productivity in Paraná (IBQP-PR) was also in attendance. In addition to IBQP-PR's educational staff, faculty from Federal University of Paraná State, Faculdades Independentes Butantã, Pontificia Universidade Católica de Salvador, and Universidade do Vale dos Sinos were represented.

A Pacific Rim JEMBA Symposium is in the planning stages for next year due to interest from Singapore, India, Indonesia, Korea, Japan, and Taiwan.

"I have attended and chaired conferences many times. Never have I been more impressed. There are a lot of sharp people here. This event was very well organized and operated"

Evaluation form of a TOC World participant

"This conference sets the standard for future years"

Evaluation form of a TOC World participant



Signing of the Alliance between AGI and IBQP-PR

If your university is interested in the JEMBA, please visit us on our website at www.goldratt.com/academy/contact.htm.

A parting note: Look for the Job Shop Game in the *Why Didn't I Think of That* article in the upcoming quarterly newsletter. The Job Shop Game was developed by Dr. James Holt, and is particularly useful in getting the audience to understand the impact of statistical fluctuations and dependent events when time is short, such as with boards of directors or executives.

The 1st Annual Defense Summit

The first Defense Summit on TOC was held the Wednesday of TOC World with 40+ participants from the contractor, logistics, test, analysis and policy fields.

The objectives of the session were:

- 1 To allow major players in the defense industry to see for themselves what TOC looks like in their environment.
- 2 To allow the audience to raise important issues the defense industry must address to allow work to be accomplished more responsively while being more cost effective.
- 3 To allow the audience to network with each other and share "lessons learned".
- 4 To allow policy makers to become better acquainted with industry concerns, and understand the initiatives being undertaken to improve processes and practices.

The Defense Summit panel consisted of:

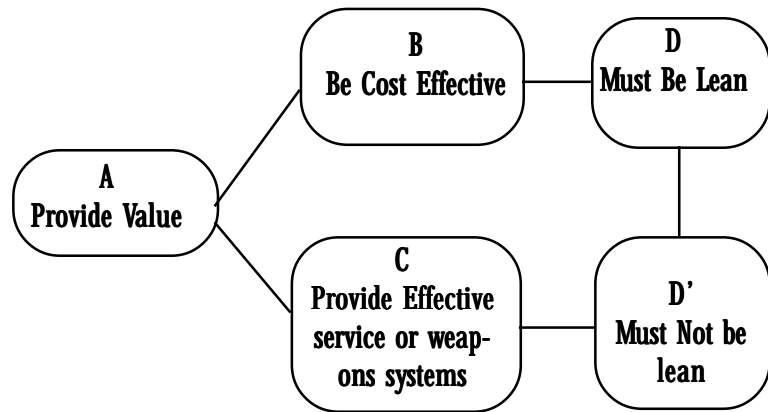
Brigadier General Alon Dumanis, Israeli Air Force
Colonel Charles Griffin, AFOTEC
Colonel Jeffrey Jackson, AFOTEC
Greg Piner, Naval Aviation Depot, Cherry Point
Robert Mendenhall, BAE Systems.

"Very good material. It is good to see AGI's continual development of the TP tools."

Evaluation form of a TOC World participant

The day started with the participants attending the AFOTEC and Israeli Air

The panel joined the rest of the group to discuss the cloud below and three questions:



Force presentations. The group then adjourned to a private luncheon that concluded with Dr. Sheila Widnall (former Secretary of US Air Force and Abby Rockefeller Mauze Professor of Aeronautics and Astronautics) delivering the keynote address on "Partnership for the Future - The Answer to Value Driven Defense". In her talk, she addressed issues on understanding Lean to mean value driven and eliminating waste from

the traditional view of cutting resources. She also urged the acquisitions and defense community to break down policies that prohibit the defense community from bringing in usable industry practices. She closed with the point that lower costs must be viewed as an output and not an input, and that the answer for the future would need to be Better, Faster and then Cheaper.

The group then adjourned to a roundtable meeting room to hear briefly from a panel of TOC experts on what was the biggest conflict they had to overcome to implement TOC and how they broke it.

Roundtable Discussion:

1. Discuss how the following conflict can be broken.
2. What real or perceived policies hinder you from breaking this conflict?
3. Why is it important to distinguish between real and perceived policies?

The discussion and chance to network was one of the high points of the day. The discussion focused at each table on what was meant by Lean.

One table's discussion was:

- Lean means JIT – war fighter needs a just-in-case capability,
- Lean means insufficient excess capacity,
- Lean does not insure a high operational readiness,
- War fighter/weapons system must be effective /efficient.

Note: perceptions or definitions of Lean was a major discussion point e.g. – Lean at a strategic level (war on two fronts) versus at a lower level (banana republic war).

Injection: Use strategic buffers to maintain sufficient excess capacity and use Lean or business/production issues.

Another table had similar discussion, but discussed a different cloud (as seen on the following page):

Another table provided a full set of answers:

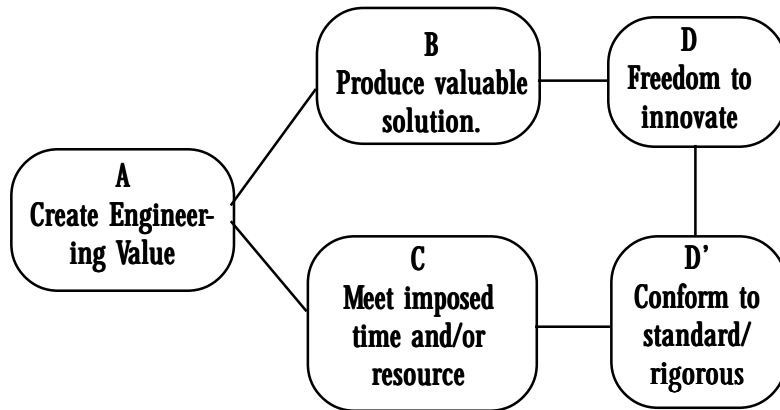
Question 1: How do you break the conflict? Assumptions on CD': Excess capacity to do

what is required? Responsiveness to new requirements
 Assumptions on BD: Less and less \$, more and more tests and test complexity
 Assumptions on DD': "Lean" has the same definition in both cases – we thought it did not!
 "Lean" on D – shrink, and then shrink some more!
 "Lean" on D' – minimize as much as

makes doing business honestly and optimally incredibly difficult,
 – We favor low-cost vendors,
 – The party line: "value",
 – The practice: "costs",
 – Idle workers are waste,
 – Budgeting is not done based on requirements,
 – We jeopardize customers,

schedule milestones
 –CCPM is with respect to project buffer
 –Like the Strikefighter – Supplier plans and has contracts that don't take into account artificial milestone
Question 3: Why is it important to distinguish between real and perceived policies?
 –Perception *is* reality.
 –Local interpretation
 –Sometimes easier to change a policy than disprove a perception.

The fourth table had a succinct summary, which was:
 –In order to break the conflict we need not only enough thrust to maintain desired acceleration, but a little more to provide maneuverability – a fitting description of Protective Capacity.
 The formal program concluded with a special presentation from BAE Systems. Almost all stayed for the reception that followed and continued on well past 8pm as people networked and discussed the days events.



possible without effecting service. There's no need to compromise!
 Injection on DD': Manage according to principles of protective capacity/buffers.
Question 2: What real or perceived policies hinder you from breaking this conflict?
 Obstacles are mostly from external influences...
 – More and more cuts every year,
 – Spread cuts proportionately regardless of impact on organization,
 – No concept of protective capacity and buffers (wrt: budget, manpower, re

– We cannot layoff servicemen – must find other ways to cut costs
 – We are chartered to "test all programs"
 – We are not funded to test all programs,
 – We tried to change policy – we can say "no, can't do more." They come back and say "yes you WILL!",
 – We don't operate as a supply chain,
 – Your #s (capacity, requirements, etc.) are not real. (With CCPM – "yes, they are!")
 –Lip-service to cost and schedule, performance first! Until we hit a wall...

– Fix data milestones (local optima)
 – Earned value
 – short term local optima
 – We currently use cost and

sources...),
 – Competition,
 – There are more players than business,
 – Competitors are not "rational" –

