



INTERFACE

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2010 STA Ty Smith Dinner

By Butch Loeb, MD, STA Past President

The Ty Smith STA dinner at the 2010 ASA Annual Meeting in San Diego was novel and enjoyable. Over seventy STA members and guests gathered on Sunday evening at Peohe's harbor-side restaurant on Coronado Island. Lively conversations ensued over cocktails as friends reunited and newcomers were welcomed. Following a wonderful Hawaiian-themed dinner, our guest speaker, Dr. Ty Smith, recounted how he used computers for almost 50-years during his illustrious career.

The annual dinner is held to honor N. Ty Smith, Professor Emeritus at the University of California in San Diego, a founding member of the Society for Technology in Anesthesia, and its President for the first 5 years. Ty is well known for his research in



cardiac physiology, mathematical modeling, and computer simulation in anesthesia. He was a mentor to many of us in the STA and we always look forward to seeing him with his wife, Penelope, at Society meetings and functions. This year was novel in that Dr. Smith graciously offered to present the dinner lecture himself.

Ty began his lecture with images and descriptions of computer technology from the late 1950s and 1960s. He showed examples of digital computers that occupied entire rooms, and analog computers that were programmed using wires. Ty traced advances in computer technology and his use of computers throughout his career. Early on, Ty used analog computers to calculate cardiac output in humans and

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Deadline January 5, 2011

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animals of widely varying sizes (including a California gray whale) using the technique of ballistocardiography. Later, he developed analog and digital computer models of the cardiovascular system, and used these models to calculate beat-to-beat cardiac output from the arterial pulse contour. More recently, he developed the Body simulator, a software simulation of human physiology and pharmacology that runs on a personal computer. Ty, who is known for his modesty, was quick to point out that he collaborated on these projects with many talented

individuals, such as Drs. Fukui, Wesseling, Fleming and Ken Starko. He emphasized that while he depended on computers for his research he did not feel particularly adept at programming them. Ironically, Ty had technical difficulties during his slide presentation (at a dinner for the Society for Technology in Anesthesia), which added an element of levity to the evening.

The evening concluded with a delightful water-taxi ride back across the bay to San Diego.



STA Ty Smith Dinner was held on Sunday, October 17, 2010 at the Peohe's on Coronado Island.



(Left) Current STA President D. John Doyle, MD, PhD, Past President of STA Jeff Feldman, MD and current STA Board Members George Blike, MD and James Szocik, MD at the Ty Smith Dinner.



Enjoying dinner at Peohe's on Coronado Island.



Current STA President Dr. John Doyle presented Dr. Ty Smith for speaking at the event.



STA President's Message

D. John Doyle, MD, PhD, STA President

With this issue of Interface I am pleased to update the STA membership with some very good news on several fronts. As you can see for the information below, STA remains active and vibrant.

At the ASA meeting in October we had a wonderful STA dinner and presentation. The presentation was delivered by none other than Dr. Ty Smith himself. Ty was one of the founders of STA as well as one of the founders of the Journal of Clinical Monitoring. His lively presentation covered approximately 50 years of computer innovations and their application to clinical medicine and patient monitoring. The food was good too!

Our upcoming January meeting in Las Vegas (Jan 12-15, 2011) is looking very exciting; I am particularly looking forward to hearing from our keynote speaker Jim Bagian, MD, PE, who will be talking on NASA safety and innovation and how developments in the aerospace industry might be adapted to

the clinical world. As Dr. Bagian is both a physician and an engineer (as well as an astronaut!), I am sure that he will inspire a great many STA members.

At the upcoming March 2011 IARS meeting to be held in Vancouver, Canada, STA will have a panel on the future aspects of anesthesia technology that I'm sure will interest everyone. Three presentations will be given, featuring topics on: future developments in intelligent monitoring technology, future developments in noninvasive hemodynamic monitoring, and finally, how the future of nanotechnology will be expected to impact on clinical medicine in general and anesthesiology in particular.

Some particularly good news that I am very pleased to report concerns a generous \$50,000 grant from Masimo under the auspices of their foundation, the *Masimo Foundation for Ethics, Innovation and Competition*. STA will be recognizing this important contribution at our upcoming Las Vegas meeting.

I look forward to seeing everyone in Las Vegas!

 A graphic featuring a close-up of a neon sign for Las Vegas. The words "JOIN US!" are in large, bold, red letters at the top left. Below it, "TO Fabulous" is written in a blue script font. The words "LAS VEGAS" are in large, bold, red letters, and "NEVADA" is in blue block letters below that. The background shows the glowing neon tubes and a blurred cityscape.

2011
Annual Meeting
 January 12-15, 2011
The Venetian Hotel
 Las Vegas, Nevada
 Registration Now Open
 Please Visit www.stahq.org
 for Additional Details



Report from the (New) Executive Director

By Jane A. Svinicki, CAE, STA Executive Director

"It Ain't Over Til the Fat Lady Sings"

This saying is a colloquialism derived from the perception that overweight sopranos sing the final arias at the conclusion of an opera. But what it means to us is that we shouldn't assume the outcome of anything until it has actually finished. In the case of product innovation – it

may never be finished.

Many STA members experience the innovation of the marketplace first hand in the development, refinement and deployment of new medical products. Many of these product innovations improve patient care and overall health. In some cases, the new product actually saves lives.

These products are sometimes the result of years and years of work, or sometimes the quick result of a lucky accident that brought information to the attention of someone who recognized its value.

In order for innovation to happen someone needs to be looking at what is occurring now and ask how could it be better or different. But the point is someone has to be **looking** for the unexpected. If no one is looking, then nothing is going to be found.

STA members are always looking. They are the intellectually curious, never satisfied, sometimes misunderstood individuals that need to find others of their kind to share their unique perspective. Within STA, they have found a home.

Why do I know that STA members are innovators? Because most STA members are strong advocates of Apple products.

The innovation of a company such as Apple Computers is astounding.

Apple has been a genius in developing products. These are products no one knew they wanted (or needed), until they 'had' to have them. Why would I buy an iPad when I have two Mac laptops, an iPod and an iPhone? Yet I will certainly buy an iPad before the end of the year.



But Apple also has been a genius in marketing products. They don't have customers; they have advocates, zealots, true believers in the Apple mission. They have cool stores, advertising campaigns and sales and service people who help you with questions (down at the Mall, not in a call center).

From Annette Schott and myself, we want to say thank you for the opportunity to serve STA during the past year. You are an innovative and fun group of people to hang out with!

Wishing you a peaceful holiday season and a successful new year. See you at the January 2011 STA annual meeting in Las Vegas.

Jane Svinicki, CAE
Executive Director

Society for Technology in Anesthesia Upcoming Events

IARS 2011 Annual Meeting STA Problem Based Learning Discussion

"Airway Imaging, Gadgets and Algorithms and Physics – Exploring the Clinical Technologies Behind Modern Clinical Airway Management"

Saturday, May 21, 2011
7:00am-8:00am

Westin Bayshore Hotel
Vancouver British Columbia Canada

IARS 2011 Annual Meeting – STA Breakfast Panel

"Imagining Future Developments in Anesthesia Technology"

Saturday, May 21, 2011
4:15pm-5:45pm

Westin Bayshore Hotel
Vancouver British Columbia Canada

American Society of Anesthesiologist Annual Meeting Events

STA Ty Smith Dinner

Sunday, October 16, 2011
Chicago, Illinois

STA Breakfast Panel

"Communication Technology in the Operating Room: Today & Tomorrow"

Monday, October 17, 2011
7:00am-8:15am
Chicago, Illinois

STA 2012 Annual Meeting

January, 11-14, 2012
Miami, Florida

STA 2013 Annual Meeting

January, 9-12, 2013
Scottsdale, Arizona

2011 STA Board of Directors Candidate Statements

Treasurer

Ravindra Prasad, MD

As is surely true for many of us in STA, I grew up as a computer enthusiast and hobbyist. I graduated from residency in 1997 (University of North Carolina), about the time that patient simulators were starting to become more widely used and available within anesthesia. Running a simulation machine back then required at least a dash of computer skills: I was quickly recruited to help in our department's fledgeling simulator program. My introduction to STA was actually around the year 2000, through these interests. Back then, Computers in Anesthesia was a subsection of STA that held its own annual meeting, with topics ranging from computers to handheld devices (PDAs) to simulators. I attended several meetings, presented some abstracts, and helped with meeting/session planning, all the while maintaining an active interest in all things electronic.

Eventually, of course, the simulator group split off and formed its own very successful organization, and CIA was incorporated into the main body of STA. I continued working within STA, primarily helping organize meeting sessions, until late 2006 when I became heavily involved with the AIMS configuration and installation at our institution (University of North Carolina Hospitals). The recent past has been a welcome return to STA, first as Scientific Chair at our annual meeting this past January, and now as Program Chair for our next annual meeting.

I am honored to be considered for the position of Treasurer of STA, and look forward to continuing to support the organization in whatever way I am able.

David L. Reich, MD

It is an honor to be a candidate for the STA Treasurer position. I have attended several STA meetings and presented several times in recent years. I have also been a co-author on abstract presentations at STA. My close interaction with recent presidents of STA and my informal attendance at Board of Directors' meetings have given me a familiarity and appreciation of the organization's mission and goals. It is a pleasure to work with colleagues who share my intense interest in medical informatics and so many other aspects of technology as applied to perioperative care. It is also vital for us to maintain anesthesiologists' leadership in these areas. My current experience as a departmental chairperson and previously as a member of the Board of Directors of the Society of Cardiovascular Anesthesiologists have prepared me for the financial and business aspects of STA leadership, if elected.

Candidates

Vote online at www.stahq.org
for one person for each position

Treasurer

Ravindra Prasad, MD
David Reich, MD

President-Elect

George Blike, MD
John Palowski, MD

I was named Professor and Chair of Anesthesiology at the Mount Sinai Medical Center in New York, NY in 2004, where I had previously been Co-Director of Cardiothoracic Anesthesia since 1990. My research interests include neurocognitive outcome following thoracic aortic surgery, outcome effects of intraoperative hemodynamics, medical informatics, and hemodynamic monitoring. I have published 97 peer-reviewed articles, 24 invited articles and editorials, and over 30 chapters. I am associate editor of the text *Cardiac Anesthesia* and am just ending a three-year term as Editor-in-Chief of *Seminars in Cardiothoracic and Vascular Anesthesia*. I have been a member of the International Organization for Terminology in Anesthesia (IOTA) of the Anesthesia Patient Safety Foundation, and work with that group and IHTDSO to create international standards for anesthesia terminology for electronic patient records.

President-Elect

George Blike, MD

I am honored to be nominated for President Elect of STA, whose founders, members, community, and culture have shaped my career. I believe, STA's core identity has always been that of a vibrant, small, but highly innovative and collaborative group of clinicians and industry experts that uses the annual meeting to build ideas and relationships that produce great value for our specialty of anesthesiology.

I have developed wonderful friendships, research collaborations and opportunities with industry via STA. If elected, my focus will be to further build STA infrastructure to support the production of consistently high quality Annual Meetings. Well run Annual Meetings (with opportunities to participate like those provided to me throughout my career) provide the best means of attracting a diverse stream of new members that share our STA values.

Again, I am honored to be nominated and will commit to serving the society to the best of my abilities if elected.

Candidate Statements continued on next page

President-Elect Continued

John Palowski, MD

It is my distinct honor to be nominated for the presidency of the STA. I have been a member since 1995 and the Treasurer for the past 3 years. As the Treasurer, I have overseen the STA from a precarious financial situation to its present less precarious situation. This may not seem like much of an accomplishment, but recall that the global economy has also had similar hard times. Thus, I consider the current financial picture to be semi-solid and the outlook to be good.

I respect and admire all of the members of the STA as leaders in the technological advances in Anesthesia. Past presidents have helped promote simulation, automated records, infusion devices and clinical monitors. The unique contribution and direct membership of the medical industry has made the STA a special group and a dynamic meeting.

My role in the STA started as a researcher and workshop participant with an interest in basic science and simulation. From the direct and friendly encouragement of Beverlee Anderson,

Jim Philip, Charlotte Bell, Jeff Feldman and George Blike, to name a few, I was invited to the Board meetings. With David Feinstein and Chris Quartararo, we started the first Anesthesia Essentials course.

My vision for the future is to strengthen the position of the STA in the Anesthesia community. I hope to continue to enrich the Society with the development of a financial reserve to provide support of activities central to the STA. We should enhance our visibility in the ASA. We should continue to advocate and inform our colleagues about emerging and important new technologies. We should encourage new members by providing resources that no other society can provide, such as workshops on AIMS, closed-loop devices, neuromonitors and green initiatives, for example.

In conclusion, I have loved my involvement in the STA for its people. I wish to continue the legacy of the STA as an intimate, informed and diverse group with a passion for technology and the wish to see better, more efficient, and safer systems to manage anesthesia care.

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Visit www.stahq.org**

Deadline January 5, 2011



Julian M. Goldman, MD Is Awarded IncoSE's Pioneer Award For Using Systems Engineering Practices To Improve Patient Safety And Clinical Care

The International Council of Systems Engineering has awarded Julian M. Goldman, M.D. its prestigious Pioneer award for his role in practicing systems engineering in the field of medicine.

indicated that, "A significant systems engineering effort is required to assure safe and effective medical device interoperability."



About INCOSE:

For a complete list of INCOSE Pioneers, the citations and criteria for award, see <http://www.incoSE.org/about/hall/pioneers.aspx>.

The International Council on Systems Engineering (INCOSE) is a not-for-profit membership organization founded to develop and disseminate the interdisciplinary principles and practices that enable the realization of successful systems. The INCOSE mission is to share, promote and advance the best of systems engineering from across the globe for the benefit of humanity and the planet.

INCOSE has grown significantly since its formation in 1990. Today, there are over seven thousand members representing a broad spectrum – from student to senior practitioner, from technical engineer to program and corporate management, from science and engineering to business development. Members work together to advance their technical knowledge, exchange ideas with colleagues, and collaborate to advance systems engineering. For more information about Dr. Goldman, his website is <http://www.juliangoldman.info>

INCOSE honored Dr. Goldman for his total contribution to the field of medicine, where he is perhaps best known for founding the interdisciplinary MD PnP Interoperability Program, sometimes known as Medical Device Plug and Play, which involves medical device integration to improve patient safety and clinical care. The MD PnP development team was honored in 2007 with the CIMIT Edward M Kennedy award for Healthcare Innovation.

"I'm so pleased to be able to honor one of our most notable INCOSE members," INCOSE president Samantha Brown said. "Dr. Goldman's body of work using systems engineering practices serves to demonstrate how systems engineering disciplines can help to solve the challenges every field faces."

Dr. Goldman is Medical Director of Biomedical Engineering for Partners HealthCare System, a founding director for the Program on Medical Device Interoperability at CIMIT (Center for Integration of Medicine and Innovative Technology), and a principal anaesthesiologist in the Massachusetts General Hospital "Operating Room of the Future".

During the Symposium, Dr. Goldman delivered a keynote address on "Systems Engineering and Patient Safety" during which he attributed significant barriers to innovation in modern healthcare to the limited cross-vendor compatibility of technologies and processes. He



Society for Technology
in Anesthesia

2011 STA Annual Meeting

January 12-15, 2011

Venetian Hotel
Las Vegas, Nevada

Society for Technology in Anesthesia

6737 W. Washington St., Suite 1300 • Milwaukee, WI 53214
(P) 414-389-8600 • (F) 414-276-7704 • www.stahq.org • stahq@stahq.org

Meeting Accreditation Information

Program Objectives

1. Examine and identify problems and potential solutions in the anesthesia work space with a special emphasis on exploring new developments in drug delivery, information management and patient monitoring.
2. Explore human factors / ergonomic approaches to improving anesthetic medication delivery systems and patient monitoring systems.
3. Investigate safety technologies in domains such as aerospace engineering to see how they may relate to the improvement of clinical care.
4. Explore opportunities to advance and enhance environmentally responsible practices within anesthesia care.

Target Audience

This program is designed for physicians, engineers or other practitioners in the field of anesthesia seeking an update on the current state of anesthesia technology.

CME Information

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of the International Anesthesia Research Society (IARS) and the Society for Technology in Anesthesia (STA). The International Anesthesia Research Society (IARS) is an accredited body of the Accreditation Council for Continuing Medical Education (ACCME). The International Anesthesia Research Society (IARS) designates this educational activity for AMA PRA Category 1 Credits.[™] Physicians should only claim credit commensurate with the extent of their participation in the activity.

Overall Goal Statement

The goal of this program is to provide theoretical and practical information on various technologies within the field of clinical anesthesia.

DISCLOSURE

It is the policy of the IARS to comply with the ACCME standards for commercial support of CME. Planning Committee members and related staff disclosures must be on file annually with disclosures made available on program materials. Faculty participating in sponsored or jointly sponsored programs by IARS are required to disclose to the program audience any real or apparent financial relationships with commercial interests related to the content of their presentation(s). Faculty also are responsible for disclosing any discussion of off-label or investigational use of a product.

Pre-Conference Session

Anesthesia Information Monitoring System Workshop (A.I.M.S.)

Wednesday January 12, 2011

1300 – 1345 The Ideal A.I.M.S. System
David Reich, MD

1345 – 1630 Participants Hands-On & Interactive Session

Participants rotate through several stations of different vendors. Each vendor station will feature clinicians and/or system configurators that have experience using a particular system. Each vendor station will provide some hands on practice to show how they are set-up, how the system is used and how to modify particular systems.

Cost to Attend ONLY A.I.M.S. Session \$225.00

A.I.M.S. Workshop (with full conference registration) Additional \$75.00

SEPARATE REGISTRATION REQUIRED TO ATTEND THIS SESSION

Schedule of Events

Wednesday, January 12, 2011

- 0700 - 0800 **Essentials Registration & Continental Breakfast**
- 0800 - 1200 **Anesthesia Essentials Course 101**
Norma Sandrock, MD
** For Industry*
- 1100 - 1315 **Exhibitor & A.I.M.S. Workshop Registration & Set-Up**
- 1200 - 1315 **Essentials & STA Board of Directors Lunch**
- 1315 - 1700 **A.I.M.S. Workshop**
(Additional Registration Required)
David Reich, MD
- 1800 - 1930 **Registration & Welcome Reception**

Thursday, January 13, 2011

- 0700 - 0800 **Registration & Continental Breakfast**

Session 1: Technology & Safety

- 0800 - 0815 **Introduction & Welcome**
D. John Doyle, MD, PhD
- 0815 - 0930 **NASA Safety & Innovation**
Jim Bagian, MD, PE
- 0930 - 1000 **Break with Exhibits & Posters**

Session 2: Greening the OR: Improving the Anesthetic Eco-Footprint

Susan Ryan, MD, PhD – Moderator

- 1000 - 1015 **Introduction to Sustainable Healthcare**
- 1015 - 1045 **Environmentally Responsible Anesthesia Equipment Choices: Reuse? Dispose? Reprocess?**
Charlotte Bell, MD
- 1045 - 1115 **Inhaled Anesthetics: Greenhouse Gases in our Practices**
Susan Ryan, MD, PhD
- 1115 - 1145 **Anesthetic Gas Capturing Systems**
James Berry, MD

- 1145 - 1200 **Panel Discussions**

- 1200 - 1315 **Lunch**

Session 3: Drug Delivery & Monitoring Technology

John Pawlowski, MD, PhD – Moderator

- 1315 - 1345 **Newer, Safer Anesthesia Drug Development**
John Pawlowski, MD, PhD
- 1345 - 1415 **Safe Technology in Drug Delivery**
George Blike, MD
- 1415 - 1445 **Drug Effect/Safety Monitors Using Processed EEG Technology**
Scott Kelley
- 1445 - 1500 **Panel Discussion**
- 1500 - 1515 **Break with Exhibits & Posters**

Session 4: Research Awards & Presentations

Kirk Shelley, MD, PhD – Moderator

- 1515 - 1615 **Research Awards & Presentation**
- 1615 - 1700 **Poster Presentation with Q&A**

Friday, January 14, 2011

- 0700 - 0815 **Registration & Continental Breakfast**

STA Session Special Session: From Detection to Decision: The Art, Science and Future of Non-Invasive Monitoring

Non-invasive monitoring offers the possibility of obtaining meaningful physiologic measurements without subjecting the patient to any risk. There have been significant advances in non-invasive monitoring methods over the years and the future holds even greater promise. Sensors and signal processing algorithms continue to improve. Ultimately, monitors enhance patient care by enabling clinicians to make better decisions but the information must be transferred to the clinician by way of displays and alarms. The two panels in this special session will explore the process of noninvasive monitoring from sensor to decision. *continues on next page*

Schedule of Events Continued

STA Special Session Continued

Session 1: Sensors

Dwayne Westenskow, PhD – Moderator

0815 - 0845 Light Through Tissue
Paul Mannheimer, PhD

0845 - 0915 Gas Analysis
Timothy Morey, MD

0915 - 0945 Ultrasound
Martin London, MD

0945 - 1000 Panel Discussion

1000 - 1030 Break with Exhibits & Posters

Session 2: Displays and Decision Making

Jeff Feldman, MD – Moderator

1030 -1100 Alarm Technology- Pitfalls and Promises
Frank Block, MD

1100 - 1130 Integrated and Smart Displays
Noah Syroid, PhD

1130 - 1200 Bringing Data to the Provider: Remote Monitoring
George Blike, MD

1200 - 1215 Panel Discussion

1215 - 1330 STA Business Luncheon & Awards
D. John Doyle, MD, PhD

1330 - 1530

Session 7: Concurrent Workshops #1

1) Researchers Workshop
Kirk Shelley, MD, PhD

2) Engineering Contest
Butch Loeb, MD

3) MPOG Workshop
Sanchin Kheterpal, MD

1530 - 1700

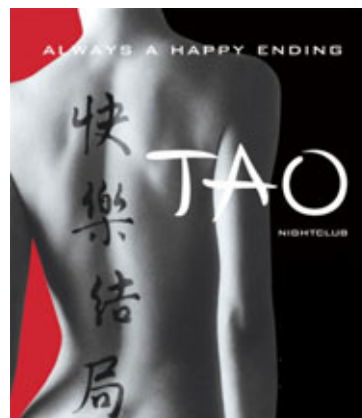
Session 8: Concurrent Workshops #2

1) Interoperability Workshop
Dr. Julian Goldman, MD

2) ASA Advisory Groups Meeting

1800 - 2015

Reception & Dinner at TAO
(Included in registration fee)



Saturday, January 15, 2011

0730 - 0830 Registration & Continental Breakfast

Session 9: Data Driven Safety: Are We Ready?

Mohamed Rehman, MD – Moderator

0830 - 0900 C. Dean Kurth, MD

0900 - 0930 Richard Epstein, MD

0930 - 1000 Jesse Ehrenfeld, MD

1000 - 1015 Panel Discussion

1015 - 1030 Break

Session 10: The Future of Monitoring – Best Practices to Protect Patients & Providers

Brian Rothman, MD – Moderator

1030 - 2300 What Can We Learn About Monitoring from Other Industries
Michael Vigoda, MD, MBA

1100 - 1130 Outsmarting the Diverter: PharmSmart
Michael Pilla, MD

1130 - 1200 Mobile Computing Platforms for Monitoring- Forms, Functions, and ROI
Brian Rothman, MD

1200 - 1215 Panel Discussion

1215 Adjourn



Venetian Hotel, Spa & Casino

3355 Las Vegas Blvd. South

Las Vegas, Nevada

**\$199.00 STA Group Rate Available
through December 10, 2010**

All Reservations must be made
individually through the hotel's reservation
department by calling: 877-283-6423

Society for Technology in Anesthesia

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