INTERFACE

November 2003

President-Elect Statement

Jeff Feldman

Another 12 hour day at work. No lunch 'til 3 pm. The desire to attend to that interesting project goes unsatisfied due to the demands of everyday work. Whether you work in clinical practice, academic practice or industry, these are familiar themes for many of us. Professional societies offer some respite from these pressures. Professional societies offer a forum not only to share the challenges of career pressures - the "Misery loves Company" benefit, but also the chance to step away from everyday pressures and be reinvigorated by the thoughts and ideas of like-minded people.

STA is one of the finest examples of a professional society that exists solely to serve the needs and interests of the membership. We have no political action committee. There is no mandate to accumulate financial assets or need to support a large office staff. STA is just a group of individuals with a passion for understanding and developing the application of technology to the care of patients who require anesthesia. Since STA defines technology in the broadest possible sense, the society is very inclusive. STA members are clinicians, educators, students, engineers, marketers, executives, virtually anyone with an interest in the use of technology in anesthesia care. The annual meeting is a metaphor for the society as a whole. Attendees find a welcoming relaxed atmosphere combined with a stimulating program and an audience given to sharing expertise and critically examining how technology impacts patient care.

INSIDE THIS ISSUE

Report from STA dinner:

Will the Golden gate bridge survive the next earthquake?

Butch Loeb presenting the Ty Smith lecture award to John Eberle, Supervising Civil Engineer for Golden Gate Bridge retrofit program

The Golden Gate Bridge was one of the first large public work project with multiple safety devices including hard hats and safety nets. During a time when 1 worker died for every million dollars spent on construction, only 11 people died building the bridge (10 in a single accident when safety devices failed). The bridge cost $33 million to build (1933-37). Current replacement cost estimated at $2.1 billion.

During several earthquakes in California and elsewhere, patterns of failure were noted. The bridge retrofit is part of a larger project to prevent structure collapse during the next earthquake. Concrete support structures which are very strong in compression are poor support laterally and in expansion. Therefore retrofits are underway to improve the lateral stability of these supports by increasing the amount of structural steel "wrapping" around columns of concrete.

President elect

Topics explored at the annual meeting include human factors, new monitoring technologies, novel approaches to therapy, simulation, physiologic modeling and clinical information technology.

STA membership has been relatively stable for several years. This stability has allowed the society to maintain a variety of programs which include the annual meeting, annual ASA dinner and breakfast panel, and the annual Computers in Anesthesia meeting. The society also maintains a competitive research grant program and in recent years has been able to make donations to APSF and FAER. It is impressive how STA has grown from the efforts of a few committed individuals to such a vibrant organization.

As we look to the future of the society there are some challenges we must meet to ensure the stability of the society in the years ahead. Membership is a high priority. I do not have statistics on the demographics of our membership but my personal observation is that as a society, "we are not getting younger." The technology of anesthesia practice continues to evolve and the new generation of clinicians will be even more comfortable using technology in clinical practice. STA needs to continue to attract members from this next generation of clinicians as well as from the industries that are developing the technology they will use. We must not only attract and retain new members, but encourage these members to take leadership responsibilities in the organization. I believe that membership initiatives need to be a high priority in the upcoming year to ensure the future of the society. We have said this before, but if each member recruited just one more member the society would double in size and so would our potential source of leaders.

The pressures of careers in healthcare will not dissipate anytime soon. The long days and mundane everyday tasks are here to stay for the foreseeable future. STA events offer a source of inspiration and reinvigoration. Let's spread the word about our society. The upcoming annual meeting is a great recruiting opportunity for new members. Julian Goldman, the meeting chair, has developed an exciting program around the theme of "Planning the Perioperative Environment of the Future." The meeting is also being held in a desirable location just a few miles outside of Santa Fe, New Mexico. Introduce a friend to STA by bringing them to the meeting. More important, get involved with the society. The board is always looking for new leaders for committees and board positions. If you have an interest in getting more involved, be certain to let one of the board members know. I look forward to seeing you in Santa Fe.

Jeff Feldman

❖REPORT FROM THE STA BREAKFAST PANEL AT THE ASA:

Pulse Oximetry meets the Press

As a prelude to the panel discussion, current STA president Butch Loeb presented the abstract awards from STA 2003.

Abstract award winners from STA 2003: Kai Kuck, Butch Loeb, Derek Sakata, and Naoki Kobayashi

After an introduction by Dr. Charlotte Bell, the panelists proceeded to present background information of pulse oximetry. Dr. Julian Goldman spoke of the basics of pulse oximetry as well as emphasizing the fact that understanding the underlying technology will allow better selection and use of the newer pulse oximetry developments.

Some problems of newer technologies involve longer averaging times and the need for accurate pulse rate measurements.

Mr. Pologe of Kestrel labs related the rate of development of new technologies and a disappointing relationship in the near past of a slowing of new tech applications.

The best quote from Mr. Pologe is as follows: "Perhaps more surprising is that the rate of generation of new monitors has not increased over the past 200 years, even though humanity's rate of overall technological progress most certainly has!" The pulse oximeter's dynamic range of 100,000 to 1 is being utilized to give a perfusion index and may have future applications. Hard limits on pulse ox technology involve the

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The Society

The Society for Technology in Anesthesia is an international organization of approximately 175 physicians, engineers, students and others with an interest in anesthesia-related technologies. Membership is open to all who are interested. The journal, *Anesthesia & Analgesia* is STA's official publication. An intermittent newsletter, Interface, is published and available on-line.

STA 2004:

Topic: Planning for the Perioperative Environment of the Future
Time: January 14-17, 2004
Place: Hyatt Regency Tamaya Resort and Spa.
Address: 1300 Tuyuna Trail, Santa Ana Pueblo, New Mexico 87004.
Tel: (505) 867-1234. Fax: (505) 771-6180
Description: The Hyatt Regency Tamaya Resort and Spa is set on over 500 acres of protected land along the Rio Grande and offers spectacular views of the Sandia Mountains and the Bosque.
Hotel Reservations: For this meeting the room rate will be $175 per night for a double room if booked before the deadline. This rate includes resort fee. Reservations should be made by calling the hotel.
Deadline: The block of rooms reserved for this meeting will be available at the conference rate until Tuesday December 23rd 2003. After that date rooms may not be available or may be available at a higher rate.

REGISTER ON LINE AT:
WWW.ANESTECH.ORG

IMMS Meeting

Topic: 4th Annual International Meeting on Medical Simulation
Time: January 15-18, 2004
Place: Hyatt Regency Tamaya Resort and Spa. (In conjunction with STA2004)
On line info: http://www.simsoc.net/

Editor Geocaching in Colorado – see page 9

STA dinner

The actual strengthening of the bridge is being done last, after both anchorages (where the bridge is "tied" to the earth) and the towers are completed. Additional complicating factors are the aesthetic architectural aspects of the bridge. Much of the steel-riveted latticework is being replaced with a stronger laser cut steel beams to preserve the original look.

The project is scheduled to be completed in the next few years at a cost of $350 million dollars. At the end, the bridge should be able to withstand a major earthquake while providing emergency vehicle access immediately, limited access in a few days, and back to full service within a month. Even technological wonders such as bridges still need maintenance, updates, and renovations to keep functioning in the 21st century.

STA breakfast

"tissue window" which determines the wavelengths that can be used in living tissues.

Finally Mr. Keller of ECRI (formerly the Emergency Care Research Institute) spoke about evaluating pulse ox performance. The February 2003 edition of Health Devices published by ECRI focused on evaluating the "next-generation" of pulse oximetry. All current studies are limited by time and money. Every location needs to determine their need and willingness to pay for functions.

There are no simple answers, but understanding the absolute limitations and the trade-offs that occur in every engineering solution can allow us as users to make wise decisions about the devices we purchase and use.

IARS meeting

Topic: 78th Clinical & Scientific Congress
Time: March 27 – 31, 2004
Place: Tampa Marriott Waterside Hotel and Marina, Tampa, Florida
Online Info: www.iars.org

EDITOR

James Szocik, MD
Clinical Associate Professor
Department of Anesthesiology
University of Michigan Health System
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Contact information / submissions / suggestions

STA Members spotted at the ASA meeting in San Francisco

Members of the Society were well represented at the ASA meeting. Using the ASA search function 48 presentations were noted to be related to equipment, monitoring and technology. Of these 48 presentations, many, but not all, were done by STA members. STA members also presented on related areas, as the following table shows:

STA members on committees

Bartkowski	R	Subcommittee on Neuromuscular Transmission
Bell	C	Subcommittee on Equipment, Monitoring and Engineering Technology
Dueck	R	Subcommittee on Equipment, Monitoring and Engineering Technology
Goldman	J	Committee on Scientific and Educational Exhibits
Loeb	B	Subcommittee on Equipment, Monitoring and Engineering Technology
McNiece	W	Subcommittee on Pediatric Anesthesia
Ruskin	K	Subcommittee on Patient Safety, Practive Management, History and Education
Szocik	J	Subcommittee on Equipment, Monitoring and Engineering Technology

STA members giving refresher course lectures

Andrews	J	Understanding Your Anesthesia Machine
Barker	S	Recent Developments in Oxygen Monitoring
Goldman	J	Working in the Operating Rooms of the Future
Mark	J	Getting the Most from a CVP Catheter
Olympio	M	Modern Anesthesia Machines: What you should know
Ruskin	K	Clinical Information Resources in the Operating Room

STA members at panel discussions

Bell	C	Pulse Oximetry Meets the Press: Point and Counterpoint
Bell	C	Equipment, Monitoring and Engineering Technology: Oximetry and Airway
Boedeker	B	Management of Patients Exposed to Weapons of Mass Destruction
Dueck	R	Equipment, Monitoring: Cardiovascular Measurement, Catheters, Temperature
Loeb	B	Equipment, Monitoring and Engineering Technology: Simulation, Computing, Clinical Assessment
McNiece	W	Pediatric Pain/Regional/Neuro
McNiece	W	Pediatric Pain and Regional
Olympio	M	Management of Critical Incidents and Team Interaction in Simulation
Ruskin	K	Handheld Computers

Feldman	J	Problems with Newer Workstations
Feldman	J	Medicolegal Implications of AIMS
Gaba	D	Production Pressure - What it is? What is the Evidence?
Goldman	J	Clinical Applications: What it does and doesn't do
Loeb	B	Pulse Oximetry Meets the Press: Point and Counterpoint - Introduction
Tremper	K	From the Perfect Storm to the Sea of Tranquility? How to Avoid Perturbations

STA members at workshops

Engel	T	Workshop on Computing
Engel	T	Handheld Computers
Feinstein	D	Basic Fiberoptic-Assisted Tracheal Intubation
Feinstein	D	Advanced Fiberoptic Airway Endoscopy
Goldman	J	Workshop on Computing
Kwasny	W	Management of Critical Incidents and Team Interaction in Simulation
Kyle	R	Management of Patients Exposed to Weapons of Mass Destruction
Mark	J	Evaluation of the Ventricular Function
Rowe	R	Pediatric Fiberoptic Laryngoscopy
Ruskin	K	Workshop on Computing
Via	D	Management of Patients Exposed to Weapons of Mass Destruction

STA members presenting poster

Blum	R	Does Training Academic Anesthesia Faculty in Crisis Resource Management Change Self-Perceived Performance in Managing Real Clinical Events?
Boedeker	B	Evaluation of the Perceived Value of a SupraGlottic Airway Management Course for Nonanesthesia Military Health Care Providers
Comunale	M	Low-Dose Bolus of Propofol at the End of Ambulatory Surgery in High-Risk Patients Postpones PONV Shifts Costs.
Cooper	J	Does Training Academic Anesthesia Faculty in Crisis Resource Management Change Self-Perceived Performance in Managing Real Clinical Events?
Dueck	R	Noninvasive Cardiac Index as a Blood Volume Surrogate to Assess the Need for Transfusion During Radical Retropubic Prostatectomy
Epstein	R	Cost Savings from Reducing Turnover Time Result from Reductions in Surgical OR Allocations, Not Less Overtime
Epstein	R	Experiences with a Computerized Scheduling Program in an Academic Anesthesia Department
Feinstein	D	Does Training Academic Anesthesia Faculty in Crisis Resource Management Change Self-Perceived Performance in Managing Real Clinical Events?
Goldman	J	A Living Laboratory: The Center for Integration of Medicine and Innovative Technology OR of the Future Project
Greenwald	S	Confirmation That Low Intraoperative BIS Levels Predict Increased Risk of Postoperative Mortality
Henrich	B	The Effects of Insertion of Orogastric Tube and Esophageal Stethoscope on Endotracheal Tube Cuff Pressures and Throat Discomfort
Hobbs	G	Increased confidence in Research Coordinators Conducting a Clinical Trial Following Simulation Training
Iwase	Y	The Accuracy of Video Intubating Laryngoscopy by X-liteTM - An Analysis of 752 Adult Cases
Kaminoh	Y	Measurement of Noninvasive Cardiac Output using NICO During Cardiogenic and Hypovolemic Shock in a Human Patient Simulator
Lampotang	S	The Virtual Anesthesia Machine: An Experiment in Sustainable Philanthropic Education Over the Web
Lichtenthal	P	Use of a Human Patient Simulator to Evaluate and Solve a Clinical Equipment Problem
Lichtenthal	P	Arrow MAC vs AVA HF - Different Designs, Different Safety?
Liem	E	Decreased Platelet Function in People with Red Hair
Liem	E	The Virtual Anesthesia Machine: An Experiment in Sustainable Philanthropic Education Over the Web
Loeb	B	Active Learning Intervention Evaluated with a Cognitive Behavior Survey, Performance Assessment, Multiple Choice and Short Answer Questions
		Cardiac Arrhythmias Decrease accuracy and Reliability of Third and Fourth Generation Pulse

Norman	P	Epidural Analgesia for Hepatic Surgery
Philip	J	Neither Explicit not Implicit Learning Occurs at the Time of Loss or Consciusness During Sevofluran Vital Capacity Induction
Raemer	D	Does Training Academic Anesthesia Faculty in Crisis Resource Management Change Self-Perceived Performance in Managing Real Clinical Events?
Sakata	D	Evaluation of a Device to Speed Emergence from Inhaled Anesthetic
Syroid	N	Applying a Propofol-Remifentanil Response Surface Interaction Model in the Operating Room: An Observational Study
Uchida	O	Cerebral and Systemic Oxygen Balance During Heart Displacement in Off-Pump Coronary Artery Bypass Surgery
Via	D	Compliance, Flow Rate and Ventilatory Mode Effects on Drawover Vaporizer Output Profiles
Wallroth	C	Use Errors and Medical Devices
Wong	D	Ambulatory Surgery Patient Selection Criteria - What the Anesthesiologist Will and Will Not Do
Yodlowshi	E	Vomiting after Tonsillectomy in pediaatric Patients

STA members with exhibits

Engel	T	Educational Multimedia for Personal Digital Assistants
Smith	N	Models in Anesthesia - **I.** Models of Chemical Warfare **II.** A Complex Model of the Cardiovascular System
Starko	N Ty	Models in Anesthesia - **I.** Models of Chemical Warfare **II.** A Complex Model of the Cardiovascular System
Stellaccio	F	Society for Airway Management
Waterman	C	Educational Multimedia for Personal Digital Assistants

Special thanks to Barb Hammond, my secretarial support who collated and formatted this data from the ASA program book and the STA membership directory. Apologies to anyone who was overlooked. If you made a presentation at the ASA and were not listed here, please let me know for inclusion in future editions of the Interface. Additionally, if you will be active at any national or international meeting, please send the information so we can let other members know of your work. JFS, ed.

Board of Directors 2003:

Title	Officer	E-Mail
President	Robert "Butch" Loeb	RLoeb@U.Arizona.edu
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Candidate Statements

For President Elect (1 year term)

Charlotte Bell, MD
(after Jan 1, 2004):
Chief, Section of Pediatric Anesthesia
Department of Anesthesiology
New York University

Having been a member of STA since 1990, I've had the opportunity to observe the evolution of the society over the past decade. Many of our founding fathers have retired or decreased their level of involvement. These individuals deserve the lion's share of the credit for integrating technology, invention, safety, and human factors into daily patient care. Their impact on the practice of anesthesiology and the STA cannot be minimized.

We are faced now with a very large next step. Many of the inventions of 20 years ago have become well-established commercial products. The lines between research, invention, business, and clinical care are fuzzy.

The STA is in a unique position to develop all of these fronts of contemporary anesthesiology. Our membership has traditionally welcomed all of these groups and should continue to foster creativity in the development of new tools, applications that provide these tools to the broadest audience and patient base, free communication between clinician and industry for optimal products, and widespread education. In order to achieve these goals, the STA must constantly renew membership and welcome participation from interest groups, while providing technology leadership to our entire specialty.

Dwayne Westenskow, PhD
University of Utah

My vision for STA is that it continues as the premier society for those involved in the advancement of technology in anesthesia. It should be the place to go to discover, evaluate and apply anesthesia technology. It should be equally attractive to clinicians, corporate leaders and researchers. To accomplish this goal, STA's focus should expand beyond traditional electronic and computer technologies to include information, bio-based and molecular-based technologies. STA's annual meeting program should include presentations of advanced technology from Europe and Asia and from affiliated societies in education, pharmacology, etc. Priority should be given to technologies from high volume, well funded, non-medial industries that provide effective solutions in anesthesia. If outstanding technology is presented, the society's reputation will increase and its membership will grow.

By way of introduction, I have been working with anesthesia technology since 1974. I began as a graduate student with the development of an oxygen consumption monitor and the application of feedback control to anesthesia. We found that automatic controllers perform as well as experts in controlling blood pressure end-tidal CO_2, volatile anesthetic delivery, and neuromuscular blockade. In 1987, working with colleagues from Electrical Engineering, our research team applied Raman Scattering technology to the monitoring of respiratory gases in anesthesia. In 1989 the research team used artificial neural networks to develop "smart" alarms for the anesthesia breathing circuit, anesthesia machine and ICU ventilator. We are currently looking at physiologic and pharmacologic modeling and display technologies as a means to enhance medial decision making.

The most meaningful outcome from years of research is the association with 16 PhD students, 34 MS students and numerous fellows and interns that have conducted their research in the bioengineering lab and now conduct research of their own in academics, government and in the medical device industry.

For Director at Large (3 year term)

René R.P.M. Hagenouw, MD
University of California Davis

After graduating from college in Nairobi, Kenya, I studied medicine at the University of Nijmegen, the Netherlands. I then worked as a research assistant at the departments of Anesthesiology in Nijmegen, the Netherlands and Cincinnati, Ohio, before specializing in Anesthesiology at the University Hospital Rotterdam. was a staff anesthesiologist at the Thorax Center of the University Hospital in Rotterdam since 1991. In 2003 I was afforded the opportunity to spend a year at UC Davis.

As many STA members, I've been involved in technology since High School. Starting off initially in radio telecommunications and digital technology as a radio amateur, I moved into computing in the mid-eighties, and merged both interests into computer aided telecommunication with the advent of the Internet. Currently, my main interest lies in Internet user interface design and Internet information transfer in its widest sense.

As a specialized interest group within Anesthesiology STA members are geographically separated, and only get together at the STA annual meeting and at the ASA annual meeting. Though many founding members have been loyal through the years, the influx of younger members into the society has not translated well into participation in STA's many committees. Many jobs that would be very suitable for relatively inexperienced members are done by STA's most senior members. STA needs to make itself more attractive to residents and starting Anesthesiologists with affinity to technology, and one way to do so is to give them more responsibility within the society. Given the restraints of members physically meeting more than once or twice a year, we need to use modern communication technology to bring our members closer together, and making junior members feel at home. Besides fielding more jobs to junior members, the Internet is the obvious choice for increasing member cohesion.

Candidate Statements

For Director at Large (3 year term)

Sem Lampotang, PhD
University of Florida

It is with great pleasure that I accept the nomination for a Member-at-Large position on the STA Board of Directors. I have been an active member of STA since joining the faculty of the UF Department of Anesthesiology in 1992. During that time, I co-chaired the "Session for Simulation in Anesthesia" for the 1998 STA meeting, served on the Organizing Committee for the 1994 STA annual meeting, was on the editorial board of the Journal of Clinical Monitoring and currently review manuscripts for *Anesthesia & Analgesia*, STA's journal. As an engineer, I have had the unique experience of working within a Department of Anesthesiology for my graduate training and as a member of the faculty. During that time, I have worked on numerous anesthesia-related projects, most notably, the Human Patient Simulator (HPS), the Virtual Anesthesia Machine (VAM) and the imaging stylet for video intubation.

I am dedicated to education and actively teach with both the VAM and HPS simulators. I teach the anesthesia machine to all incoming anesthesia residents at the University of Florida and have made VAM, a tool developed originally for internal use, accessible free of charge to the global anesthesia community. The insight acquired through teaching has been invaluable for enhancing the educational value of both simulators. If elected to the Member-at-Large position, I look forward to continuing to contribute to the STA as a member of the Board of Directors

For Industry at Large (1 year term)

Mike Petterson, BA, RRT, CPFT
Sr. Director of Clinical Research
Masimo Corporation, Irvine, CA

Mike has more than 30 years of experience in clinical medicine and anesthesia monitoring technology, including clinical research, engineering research and development, marketing, and management. Mike worked in respiratory care, pulmonary function diagnostics and blood gas analysis in Kansas City for 13 years at Bethany Medical Center, St. Luke's Hospital, and the University of Kansas Medical Center (UKMC). Mike spent 8 years as the supervisor of the Pulmonary Function Lab at UKMC where he directed the department and trained respiratory therapists and pulmonary fellows on respiratory mechanics and blood gas analysis. Mike was involved in pulse oximetry research in the early 1980s and co-authored numerous early studies on this technology.

He left the clinical world for medical industry as the Director of Medical Services for Biox Technology (Boulder, CO) in 1984. Biox shortly became Ohmeda where Mike held a variety of positions in Marketing and Research and Development over the next 11½ years. Mike became an expert on the clinical use of pulse oximetry and capnography. He was in charge of clinical research that demonstrated the clinical utility of these technologies. In 1995, Mike joined Masimo as Manager of Clinical Programs. He is currently Sr. Director of Clinical Research at Masimo where he continues to be involved with clinical research investigating the benefits of advanced technologies.

Mike has been involved with promoting STA within the corporate community and has supported numerous STA programs and events. His goal if elected would be to encourage further involvement of STA-industry relationships in development of anesthesia technology.

Deb Zane, BS, MS, CNMT
Vice President Business Development
Criticare Systems, Inc.
Education:
BS, Medical Technology, University of Pennsylvania
Medical Certifications: CNMT, RDMS
MS, Electrical Engineering, University of Pennsylvania

My professional background encompasses a broad range of experience from business, clinical, and technical perspectives, including engineering, product management, marketing management, and director-level roles at Johnson and Johnson Corporation, Advanced Technology Laboratories, and Datascope Corporation. I believe that my background and education will enable me to work effectively with the clinical and industry membership of the society.

I would like to see expansion of growth-related activities between industry and the medical membership of the STA. I believe that fostering a collaborative, non-competitive environment would help to improve basic standards of performance for related technologies that ultimately affect patient care.

STA board meeting at ASA

STA board meeting at ASA, Immediate Past-president David Seitman "plugging-in" at center

Technological Hobbies

While many of us use technology daily in the operating rooms and hospital settings, there are recreational endeavors that are high tech and fun. A prime example of this concordance is geocaching. In short, geocaching is playing treasure hunt with a GPS receiver. GPS receivers use signals from orbiting satellites (redundancy check) measured with extreme precision to "triangulate" on a single point.

From the geocaching website:

When the GPS signal degradation called Select Availabilty (SA) was removed by the Clinton Administration May 1st, 2000 (statement), it opened up the possibility of games like this one.

On May 3rd, a container of goodies was hidden by a someone outside of Portland, Oregon - in celebration of the removing of Selective Availability. By May 6th the cache was visited twice, and logged in the logbook once.
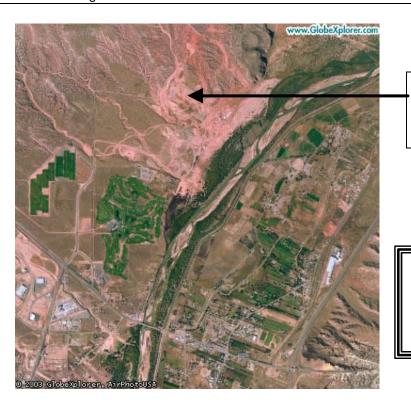
Mike Teague was the first to find the container, and built his personal web page to document these containers and their locations that were posted to the **sci.geo.satellite-nav** newsgroup.

In July of 2000, Jeremy Irish found Mike Teague's web site and found his first cache outside of Seattle, Washington. Recognizing the potential of the game (but never expected the growth), Jeremy approached Mike Teague with a new site design, used the name Geocaching, and developed a new web site adding virtual logs, maps, and a way to make it easier to maintain caches as the sport grew. The site was alive for a while, but the official torch was passed to Jeremy on September 6.

Since the launch of the web site, the Geocaching sport has grown to caches in all 50 states and over 100 countries. There are now many variations of the game, including virtual caches, offset caches, puzzle caches, and multi-stage caches. New ideas and new great games crop up every day.

From its inception, Geocaching.com has been developed and maintained by Jeremy, with the assistance of Geocachers around the world. Many thanks to the Geocaching community for making the game it is today. The official web site for Geocaching is Geocaching.com.

I will have my Garmin e-trex Vista with me at the STA, along with a list of local caches. If a small group is interested, I'll give them a personal experience with global navigation. Please bring a trinket along to exchange as most geocaches have a physical cache as well as a logbook. There are probably 20 or so geocaches within 10 miles of the meeting.

** You will be here !
Approximate
Coordinates: N35° 20'
**   W 106° 33'**

Hyatt Regancy Tamaya Resort
(when under construction in 2000)