



Print Magazine has called Brad Holland "the fiercest and most independent political artist of our time." Brad co-organized the first National Illustrators' Conference, is one of the Founding Board Members of the Illustrators' Partnership of America and is our guest contributor in this issue.

AMI

News

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How Things Have Changed

by Brad Holland, guest contributor - representing the Illustrators' Partnership of America

This article is an edited reprint of a talk given at the Santa Fe 2001 Illustration Conference and made available at the Annual Meeting of the AMI at Asilomar.

When the Graphic Artists Guild was formed in 1967, many designers and illustrators believed that since they were all graphic artists, their common interests could best be served by a large umbrella organization. Illustrators then, like designers now, generally didn't own the secondary rights to their commissioned work. If an artist did a painting for a large national magazine, the publisher could claim all rights to it, just as major corporations now claim all rights to a logo they commission from a graphic designer.

Illustrators' rights were rarely in dispute and the only issue open to negotiation was price. But in 1978,

Congress revised the copyright law, bringing the U.S. code into line with the law in most other countries. The new law allowed organizations like the Guild to represent staff artists for purposes of collective bargaining. At the same time, it confirmed that 'employers' could continue to keep all rights to any work done by their staff. But for freelancers, this change in the law was dramatic: while denying us the right to bargain collectively through our professional organizations, the new law gave us the right to keep and exploit our secondary rights as intellectual property.

Given this new distinction between staff and freelancer, and given the effects these distinctions have had on the ownership of rights, this period would have been ideal for the leaders in our field to form an organization such as designers have in the AIGA (the American Institute of Graphic

Arts). A specific trade association would have allowed us to focus on those business issues we could no longer address exclusively through an umbrella organization, and to exploit the unique opportunities that the new law had opened to us. An illustrators' AIGA could have raised the profile of illustration and aided artists to develop new markets. And it could have helped us create a mechanism for registering and protecting our newly-conveyed rights against misappropriation and infringement. But no one acted and the job fell to the Graphic Artists Guild. To its great credit, the Guild has worked for years to serve the varied interests of its diverse membership.

But an umbrella organization, by its nature, harbors potential conflicts of interest. Illustrators and designers, art directors and freelancers, studio heads and their employees are all

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From the Editor

Welcome to the Thanksgiving issue of the *AMI News*

As you can see, the newsletter is currently 'undergoing renovation'. The new design is intended to fit more words per page, to feature bigger graphics, and to nonetheless have some breathing room.

Ah ... crisp autumn air, cranberries, turkey stuffing and *endless possibilities*. Those are my thoughts when reading this issue's material. Brad Holland's long-overdue article, while answering questions a lot of us have been asking ourselves, points toward the future with strength and hope. The same can be said of Virginia Ferrante's Profile on Bill Glass and Immersion Medical — the TouchSense™ technology described is revolutionary, and the application of medical illustrators' talents to haptics an exciting development. I'd suggest that any of you who haven't seen the company's demo movies check them out at:
www.immersion.com/products/medical/demos.shtml

The Winning Ways column is now compiled and edited by Jill Gregory. Winning Ways is an uplifting way to see friends and colleagues 'shown off' together. If ever the market gets you down, just reread Winning Ways to regain your momentum.

An obituary to Emil Hospodar from Scott Barrows is a special feature in this issue. Emil clearly had an incalculable influence on our field and it's an honour to print an account of his life on the following pages.

I cannot overstate the importance readers' contributions play in the quality of their association's newsletter. Your feedback, news and letters are not only welcome but essential.

Warm regards and Happy Thanksgiving,

A handwritten signature in black ink, appearing to read 'John Harvey', written in a cursive style.

LETTERS POLICY

Letters printed in the *AMI News* do not necessarily reflect the editorial position of the *AMI News* or the opinion of the Association of Medical Illustrators. Letters should be sent via email to the editor, must be exclusive to the *AMI News* and must include the writer's full name, address and daytime telephone number. The editorial review board of the *AMI News* reserves the right to condense letters.

Emil Hospodar
1923 - 2001
his Life and Work

by Scott Barrows, (F), Graduate
Program Director
of Biomedical Illustration, UIC

To say that Emil Hospodar lived a full life would be somewhat of an understatement; he lived at least two or three full lives. 'Uncle Emil' touched so many people in his lifetime that the number cannot be measured. With his pipe, goatee, and a twinkle in his eye, Emil was a friend, a teacher, a rock of stability, a father figure, and mentor to all.

To those in the Association of Medical Illustrators, Emil was Director of Biocommunication Arts (now Biomedical Visualization) at the University of Illinois at Chicago from 1976 to 1982, replacing the retired Professor A. Hooker Goodwin. He instituted many new developments during his tenure as the Illinois director, adding a built-in internship program, new technology, additional classes in communication, and a system of medical illustration satellite sites around the state of Illinois. When he retired in 1982, he was succeeded by Dr. Alice Katz, one of his most promising former students.

Professor Hospodar taught in the Illinois program for almost 20 years prior to taking over as director. He specialized in anatomical sculpture, exhibit design, model making, and teaching prosthetic techniques. He served as an assistant director of the academic program, and was the major force behind a constant upgrading of the curriculum.

Emil was also active in the AMI, serving on a number of committees and as President in the early 1970's.



Emil at his retirement dinner (early 1980's) at UIC Medical Center Faculty-Alumni Center

He forged many lifelong friendships within the AMI, and he was known for his practical viewpoint, common sense, and devotion to students.

Emil was a graduate of North Central College at Naperville, Illinois, where he met his wife Marge. He also attended the program in Medical and Dental Illustration at the University of Illinois at the Medical Center (as it was then called) under the legendary teacher and co-founder of the AMI, Professor Tom Jones.

In World War II, Emil was a war hero on the Pacific front. To many, this fact was not known until his memorial service. This was typical of Emil's humility. In fact, he received a silver star, bronze star, and a purple heart for saving the life

of a soldier in battle by pulling him back to American lines. Later, Emil spent almost a year recovering from malaria.

Prior to the war, Emil was a gifted golden gloves champion boxer, and



Jane Hurd (then a student at UIC), Emil Hospodar, Bob Parshall (Professor), and A. Hooker Goodwin (Director of the Illinois program prior to Emil) in late 1960's.

How Things Have Changed

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even coached the sport in college. His small stature was misleading to an unwary opponent. When he was younger, he helped manage the family restaurant business, and later was introduced to the field of medical illustration by a physician who recognized his inquisitive intellect and skill as an artist.

After retirement, Emil and Marge moved to Galena, a picturesque community in northwest Illinois, (the home of former president and Civil War general Ulysses Simpson Grant). There, he bought and fixed up historic homes, while his wife ran an antique store, Galena Creations (which she still owns with daughter Jean). Emil became a pillar of the Galena community, serving on municipal boards, as an elder in his church, and as a business owner. He was known as a kind and generous man with 'a twinkle in his eyes'. For many Illinois graduates, a visit to the scenic community always included a dinner or visit with the Hospodars.

In 1999, the University of Illinois at Chicago honored Professor Hospodar for his significant contribution to education by creating the Hospodar Medal. Appropriately, the first recipient of the prestigious award was his protégé, Dr. Alice Katz. Up to the time of his passing, he still served as an advisor to the UIC Program Director Scott Barrows.

Emil is survived by his wife Marge, daughters Jean (Donatiello) and Janet, grandson Aron Donatiello, and hundreds of friends, colleagues, and former students.

He has given us so much. He will be missed greatly. ☞

graphic artists and may benefit from composing a single face to present to the outside world. But they are also frequently – even regularly – on opposite sides of a business deal. And no single organization should be expected to represent all the interests of these groups all of the time. Over the last decade, developments within the illustration field suggest that there are certain things that freelance illustrators must now do by, and for, ourselves.

WHY A LICENSING AGENCY?

For freelance artists the good news of the 1978 law came with a dose of the bad. Since clients were no longer able to claim all rights to our work by default, they began extracting rights through work-for-hire contracts. And since clients were no longer getting to keep all the rights to the work they used, they found it reasonable to let fees stagnate and decline against the rising cost of living. It was middlemen who first recognized the value of the growing inventory of untapped rights. And it was they who first began to capitalize on this resource. By getting control of secondary rights from certain artists and binding them under long-term contracts they amassed millions of images into stock "agencies." Then by taking advantage of advances in digital archiving and retrieving, they began to revolutionize the way clients buy art.

In the past, an art director who needed a particular image – say, goats in a tree – would be likely to commission an illustration rather than waste time trying to find one. But with a vast library of pictures, a search engine and the right key words, a researcher now can likely turn up even the most unusual

image. Since the rights to these images can be cleared, scans delivered and transactions paid for on-line in a matter of minutes, many art directors now commission work only when they can't find what they need in stock. Whether you like it or not, this is the modern marketplace of visual content, and the challenge for freelancers will be to find a place for ourselves in it before it's too late.

A licensing agency is the best solution we can think of but its resemblance to a stock house has scared many artists. The truth is, stock houses have co-opted the principle of a licensing agency. They've turned licensing itself into a discount business to wedge into our markets. But their cheap prices and self-serving transactions do *not* have to be the future of licensing. We can sell our secondary rights the way we want, if we have the vision and the will to do what it takes to protect our interests. But for a trade association to do this, artists must first find a way to *take back* their rights. That's why developing a licensing agency is the first goal of our trade association. It is *not too late* if artists act in concert.

NEW OPPORTUNITIES

A licensing agency will not by itself revive the illustration business. A mechanism for protecting work, monitoring infringements and collecting usage fees will be nothing more than a floor on which artists can build their individual careers. But it will be the basic protection we now lack to guard our rights and protect our markets. If we can create this floor, the next advances will be more dynamic.

Over the last five decades, the best illustration has freed itself from

literal interpretation of texts and has become a true art form. People see the work of illustrators everywhere, but we're invisible. If we want to thrive and maintain our independence as craftsmen, we need to project our hard-earned creative success beyond the illustration ghetto into the general culture.

If we act now, young artists may well look forward to marketing their own work as on-demand prints or to receiving fair compensation for a variety of licensed usages. Individuals can do this now but a licensing agency would give us real leverage. And an illustrators' trade association would allow us to share what we've learned. This is why we've formed the Illustrators' Partnership of America: to serve the illustration profession independently, but to work wherever possible under the large umbrella of the Graphic Artists Guild.

WHAT IS LICENSING?

The purpose of a licensing agency is to protect the copyrights of its members, monitor infringements, collect and distribute fees for the usage of secondary rights and to do so collectively, insuring the benefits of the whole to its individual members. All professional illustrators currently license first-time usage rights to clients. The aim of a licensing agency is to help artists protect those rights and standardize usage in the growing but chaotic market for secondary rights. Licensing takes many forms and licensing agencies employ a variety of mechanisms to retrieve and distribute work. If the Illustrators' Partnership of America is successful in developing a licensing arm, we'll adopt the various forms already in

use by other licensing agencies around the world.

1) Stock

In developing a proper model for licensing secondary rights, our aim is not to damage our primary markets. This means adopting one of the artist-friendly, direct stock models already in use. These models already give artists the right to price their own work and control usage. The advantage of a licensing agency is the superior market power a large number of artists can bring to bear on negotiations with clients. Unified bargaining would give artists the protection of a non-binding bottom price for re-use fees, and prices float upward for different artists. This is the closest freelancers can come to collective bargaining under existing law.

2) Product Licensing

Because usage on commercial products will vary widely, this kind of license should be handled by artists and reps. But since product licensing is less common than traditional print usages, artists may need business advice on how to price usage and legal help to structure deals. A licensing agency could handle these negotiations for artists without reps or provide legal assistance to others.

3) Print-On-Demand / Artists' Prints

Large stock houses are now pioneering this new market, using their success in stock as a business model. By getting inventory from artists and paying them as little as possible on sales, these giant "image providers" hope to develop this new market by cutting out artists almost completely. A licensing agency would aggregate our rights, negotiate with these firms for fair

usage and protect any additional rights from being usurped in the deal.

4) Photocopying and Educational Licensing

Most of us are unaware that our work is already being licensed for profit in a variety of usages by corporations and other industries who are not compensating artists. Reprographic usage currently yields millions of dollars annually to publishers for these rights. But until now, there has been no mechanism to identify how much of that money should be returned to artists. A licensing agency would collect, aggregate and distribute the proper royalties to us, sometimes to individual members, sometimes apportioned to members as a group through the use of blanket licenses.

These are some of the forms licensing takes. For a licensing agency to serve the interests of artists it should:

- a.) try to disrupt our traditional markets as little as possible;
- b.) regularize prices for the use of secondary rights, and endeavor to build a floor under our secondary rights sales;
- c.) devise protocols for product licensing and on-demand prints;
- d.) identify photocopying and educational usages, collect fees and return them to artists.

WHY NOT INSTANT ASCAP?

The American Society of Composers, Authors and Publishers (ASCAP) is the traditional model for a secondary rights licensing agency. The logic of ASCAP is the logic of monopoly: for a licensing agency to work, you must license the secondary rights of the serious professionals in the business. That way clients will have nowhere

How Things Have Changed

— continued

else to go to obtain the rights to existing work. With that kind of market dominance comes the ability to set fair prices for creators. And therein lies its usefulness to independent contractors.

Because we've invoked ASCAP as a model for the IPA licensing project, some people have asked why we didn't start at once with an all-inclusive organization to license the work of everyone in the business. There are several reasons.

1) Starting an organization is different from running one. ASCAP is a multi-million dollar enterprise with a broad-based global infrastructure. To start something like it from scratch would take millions of dollars. If every illustrator in the business could pony up ten grand apiece, maybe we could do it. But lacking several million, we began the IPA with our own money, recruited a front line of members and underwrote a business plan.

2) You have to focus your resources. The virtue of a small start-up is that you can manage it without an expensive infrastructure and make decisions without a complex bureaucracy. Even if your goal is to march an army up a hill, you may first have to take the hill with rangers.

3) We want to be as inclusive as possible without being indiscriminate. The purpose of a professional illustrators trade association is to represent professional illustrators. Indiscriminate membership would defeat its purpose. Our task over the last year has been to set the outer limits of professional standing. That's why we wanted to avail ourselves of the advice and consent of others who

have proved that they can make a living as professional illustrators or who have otherwise been recognized for their achievements by their peers.

4) Building from the center outwards. We based our initial membership on juried competitions because we thought it was the least political way to create a representative body and expand the organization beyond the five of us who started it. Since nobody elected us, this criteria gave us a core group "elected" by industry-wide consensus. This group, in turn, screened others for eligibility. This process was the fairest and quickest way we could think of to convert a self-selected board into a representative professional body. And it's given us time to define the terms for broader membership.

5) Our goal is to include all serious professionals, but not everyone who calls himself or herself an artist. We've tried to model our membership standards on those of professional organizations such as the Screen Actors Guild, Actors Equity and ASCAP itself. Any artist who has done assignment work for a wide variety of professional publications will be eligible for associate membership in the IPA. If we're successful in establishing a licensing agency, these members will be welcome to license work there. Associate members will be eligible for full membership in the IPA at any time. Founding and general membership in the IPA will continue to be based on competition, peer review, invitation and other individual considerations.

6) Developing an asset. With our own seed money and donations from our initial membership, we've been able to build a solid group of top

talent and develop a business plan to look for venture capital. Finding the right investors is one way we can raise the money it'll take to build a licensing agency and promote it to clients.

7) A licensing agency will require a specialized investor. An investor-backed business model will not meet our needs unless it is owned by artists and directed by artists through the services of a professional manager. This will require prudent structuring and a specialized investor with long-term, not short-range interests.

8) A licensing agency is not a club. It's important to stress that a licensing agency is not a club. It's a society for collecting certain fees owed to working professionals for certain usages of their work. Some types of illustration usage – photocopying fees, for example (which artists do not currently collect) – will probably be subject to blanket licenses. That means the individual fees, which cannot be individually identified, are gathered into a lump sum and apportioned to members according to certain formulas. These formulas have been worked out over the years by similar licensing agencies around the world. Indiscriminate membership in a licensing agency would invite abuse of this process, allowing amateurs and wannabes to share in revenues rightly owed to working professionals. Unless you want to first admit anybody into a licensing agency, then identify and expel those who are ineligible, building membership like tree rings seems the more prudent course.

9) A licensing agency is not a stock house. Because so many artists have already surrendered control of their



rights to stock houses for short-term gains, they've given these middlemen a powerful competitive advantage. Stock houses sell cheap and pay artists as little as possible. Our objective is to restore fair market prices and pay artists as much as possible. This makes it a harder sell to the average investor.

But the point of a licensing agency is to serve the long-term interests of our business by allowing us to become a market force. If we're going to do this, we believe it's worth a long-term commitment.

Author's Biography

Brad Holland's work has been exhibited in the Louvre, the US Library of Congress, the Museum of American Illustration, the Mikkeli Art Museum/Finland, and the Musée de Beaux-Arts/Clermont-Ferrand, France. His work is included in the permanent collections of the National Portrait Gallery and the Museum of Modern Art. Brad has been awarded gold medals from the Art Director's Club of New York, The Society of Publication Designers, and the Society of Illustrators.

He is twice the recipient of Playboy Editorial Award, the Robert Geisman Award and the Hamilton King Award from the Society of Illustrators, and most recently the Walter Hortens Distinguished Service Award for Professional Practices, from the Graphic Artists Guild, in recognition of his commitment to educating other artists about stock houses and their impact on the illustration market.

Brad was one of the organizers of the first national Illustrators' Conference, and is one of the Founding Board Members of the Illustrators' Partnership of America. 📧



VESALIUS
TRUST

Silent Auction and Continuing Education Survey

from Lisa Warren, CMI (F)

Executive Director

The Vesalius Trust would like to thank everyone who participated in the silent and live auctions during the annual meeting in Asilomar. Although the student-designed T-shirts were not there, many wonderful non-medical and medical artworks were available to the highest bidder. A special thank you goes to all of those who donated their work; we greatly appreciate your generosity. This year's auctions raised over \$9,000.

These funds will not only benefit the current medical illustration students through scholarship awards but will also benefit all professionals in the field of visual communications. Our initial survey, which was sent to all visual communication professionals, helped the Vesalius Trust Board to identify your continuing education needs. A follow-up survey was sent primarily to professionals located on the East Coast to further define your continuing education program desires. Now the creation of a pilot program is underway. The Vesalius Trust hopes to make this course available in the next year and, with that experience "under our belt", apply for grant funding. Your gifts and donations to the Vesalius Trust enable the Board to make this happen and to fulfill our mission "to provide leadership for the advancement of education and research in visual communication for the health sciences".

Thank you again for all your support. Please keep us in mind when you are 'cleaning out the attic'. Auction donations can be made any time of the year by sending your items to a Board member or to:

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Profile: Bill Glass at Immersion Medical

Discusses Medical Simulation Training & TouchSense Technology

by Virginia Ferrante, MA



User interface and screen shot of the underlying anatomy for a CathSim geriatric case.

Bill Glass graduated from the Medical College of Georgia in 1990 and went to work for BRC, a medical-legal company in Texas. He soon returned to the Medical College of Georgia and began working at the Center for Clinical Anatomy on the creation of the Microvascular Atlas of the Head and Neck – a multimedia application targeting neurosurgeons. In the fall of 1994, he began freelancing in the evenings with a small multimedia production studio in Rockville, Maryland called *Hightechsplanations*.

In 1996 Bill moved to Maryland and began working full-time for the company. Bill was creating 3D models and animations using Wavefront (later to become Alias/Wavefront PowerAnimator and then Maya) for inclusion in Virtual Reality (VR) programs and surgical simulators. *Hightechsplanations*

shifted from the creation of VR experiences for medical device companies and pharmaceutical tradeshows to product-based surgical simulators. The company was acquired by Immersion Corporation of San Jose, California in the fall of 2000 and became known as Immersion Medical. The company now has three product lines: CathSim, AccuTouch Endoscopy and AccuTouch Endovascular. The medical department employs two MDs, two RNs, a video producer/ animator and three medical illustrators: Ken Heyman, Stacey Sachs and Mark Hovis.

Immersion Medical uses TouchSense technology in its cutting-edge training programs. TouchSense makes computer interaction a more natural experience: instead of just pointing at elements on the screen, the user interacts with the 3D models

through an interface that duplicates the devices actually used in real procedures. These models have realistic textures that deliver tactile sensations. By engaging both the senses of sight and of touch, these training programs are inherently more intuitive.

Immersion Medical decided to explore tactile communication in the other direction – from computer to human. They started by devising medical and scientific applications that let doctors and medical students practice surgical procedures in a realistic, yet cost-effective way. Their technology is also widely used by the entertainment software industry: joysticks, steering wheels and game pads deliver tactile responses, making computer games more lifelike.

Profile: What are your day to day responsibilities as the Director of Medical Modeling and Illustration at Immersion Medical?

Bill: My responsibilities include overseeing the creation of medical content for our product lines. This includes: establishing requirements and schedules for our illustrators and animators; segmenting (extracting contours from serial data such as CT and MRI datasets) the relevant organs and creating polygonal models of those organs; setting up texture coordinates and creating animations & illustrations for the simulators. The medical modeling department currently employs three full-time medical illustrators and a video producer/animation specialist. Ken Heyman, a graduate of Johns



Screen shot of the simulation showing the cecum and the interface screen for the Colonoscopy Simulator.

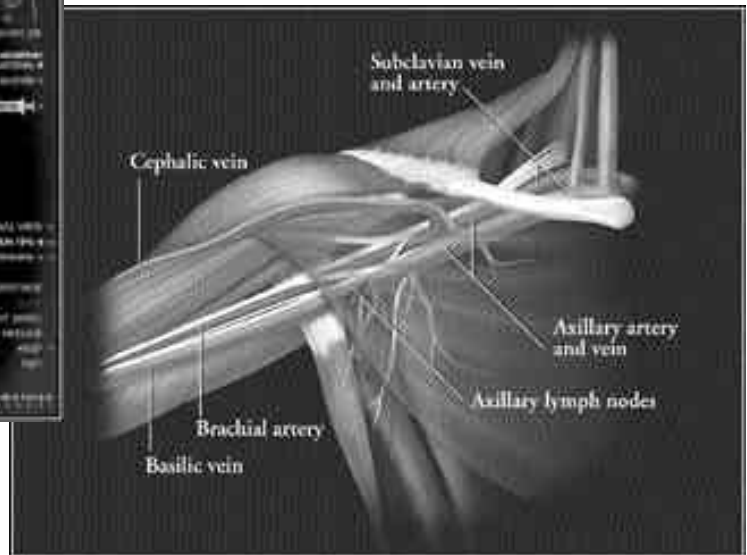


Illustration for the didactic portion of CathSim.

Hopkins, joined the staff in 1998, and is involved in segmenting and creating 3D models for roughly half of the product lines, as well as overseeing the work of our in-house contractor. Stacey Sachs, a graduate of the Michigan program, has filled in for Ken in the creation of texture mapping and 2D illustrations, and is learning 3D modeling. Mark Hovis shoots and edits all of our video and also creates the majority of our animations.

Profile: How are the underlying anatomical views created for the IV therapy training program, CathSim? What traditional and or digital techniques do you use? What reference material do you use?

Bill: "Virtual" patients (real people with invented case histories) are photographed, as are specific insertion sites, on which the anatomical illustrations are based. Our artists use these photographs as bases for either sketches on paper or on the computer using a Wacom tablet and stylus. The final images are rendered in Photoshop on various layers. Additional items such as tourniquets, needles, bruises and antiseptic swabs are also masked out

and registered with the base photograph.

Profile: Once the illustrations are created, how are they incorporated into the medical simulation?

Bill: The illustrations are incorporated into the simulator as a series of registered images. For example, if you were to select the patient that represents case #1, you would then proceed to click on the insertion site to advance to the lesson. If you had chosen the dorsum of the hand, a new close up image of the hand would appear on the screen. The user could "stretch" the skin on the image by placing traction with the thumb on the interface device. After the user follows the proper steps of site preparation and has selected the correct needle, he grasps the needle on the interface device and uses this to guide the needle on the screen into the vein. If the force applied is correct the user feels a "pop" and the needle on the screen displays a flashback of blood. If the force is

incorrectly applied, the "patient" cries out and a bruise appears on the image. The simulator is based on proprietary code written in C++ and OpenGL wrapped inside of ActiveX controls and embedded in an Authorware environment running on a Pentium III under Windows NT.

Profile: What programs do you use to create the 3D imagery for the Endoscopy Simulator Modules? Do you or any of the animators go to the O.R. to observe the procedure? Did you use a video as reference for internal anatomy?

Bill: We use a variety of applications, including some proprietary software. The two Endoscopy product lines, Bronchoscopy and Colonoscopy, require different approaches. For the Bronchoscopy cases we will start with a CT dataset which represents the pathology to support the case history. The upper airway is segmented using SurfDriver (Macintosh) resulting in a high-density polygonal model. This model is then imported into Maya (SGI)



Enhanced screen shot of a biopsy from the Bronchoscopy Simulator.



From left to right: Mark Hovis, Ken Heyman (inset), Bill Glass and Stacey Sachs.

and serves as a template for the construction of the final low-to-medium density polygonal model. The models are then texture mapped in DeepPaint 3D (Windows). Finally, the models are imported into a proprietary application where additional information, such as lighting, visibility and collision detection, is added.

Models for the colonoscopy cases start out from procedurally generated models that are then customized by modeling the rectum, cecum and the pathologies in Maya. These models then follow a similar pathway through DeepPaint 3D and into the proprietary application.

Since the major focus of the Endoscopy is on a video monitor we do not usually need to observe the procedures. We use videotapes of the specific cases as a reference for the creation of the texture maps and pathologies. To a lesser degree, we use pathological atlases and the standard anatomy textbooks. We also rely on the in-house review of our medical experts.

Profile: Once you've built the model of the rectum and colon how do you adapt them for other training scenarios?

Bill: We have several basic colon model templates which differ mostly in the sigmoid region and reflect the typical looping patterns. We then add the specific pathology from the existing library or in the case of a new pathology, we model it from videotapes. Some of the pathologies can be represented by texture maps only and do not require underlying pathology models. As our library grows, we will be able to generate new cases more efficiently.

Profile: What excites you about your job?

Bill: The most exciting thing about my job is the chance to solve problems and devise new approaches for communicating traditional teaching methods. In the past, these teaching methods required the presence of a skilled professional and put the patient at risk due to the inexperience of the novice student.

Using the simulator the student can practice the procedures and gain competency without the danger of injuring animals or patients.

I am most proud of our Transbronchial Needle Aspiration module: it demonstrates the strength and efficiency of teamwork. From a content standpoint it is one of our most complex modules, and it was created on a very tight timeline. Everyone on the team contributed his or her best effort and the result shows these efforts.

Profile: How are your projects assigned? How much time pressure are you under? What new modules are on the horizon?

Bill: New modules are based on a combination of market research and technological challenge. Once the decision for a procedure has been made, our core team (representatives from each group — medical, programmers, art, hardware, educational design, and technical support) meets to decide the best approach and also to establish requirements. At these first meetings, time estimates are made, and schedules and milestones are established. From that point, managers assign the specific tasks to

Profile

— continued

their teams and report at weekly progress meetings. Since the medical modeling and illustration group creates content for all the product lines, we are under constant pressure. However, with the addition of more medical illustrators to the staff, we have less of a bottleneck in the development pathway.

We are scheduled to release two new modules – Biopsy and Polypectomy for the Colonoscopy line in the next two months. By the end of the year we will be releasing new modules for the Endovascular simulator and CathSim simulator. We are also negotiating new and/or custom

simulators with some major medical equipment manufacturers.

Profile: Where are haptics going to take medical illustrators – most of us were trained traditionally – should we all be running off to animation school in order to secure our futures?

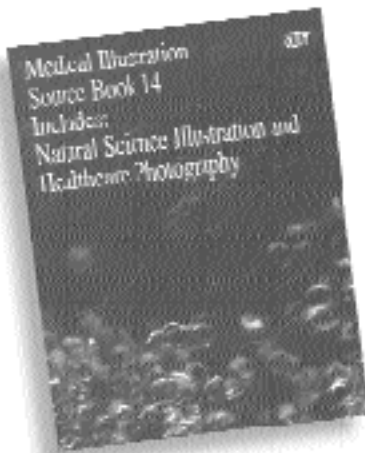
Bill: The field of haptics is just starting to approach the cost-effective point so that it can be incorporated into peoples' everyday lives in a wide variety of ways. I find that the traditionally-trained medical illustrators at Immersion Medical have been able to broaden their

skillset with the additional mastery of 3D applications. As the cost of these applications and the powerful computers to run them continues to decline, I think medical illustrators will improve their value to employers by learning a 3D application. However, with numerous online tutorials and user group listservs available, I do not believe it is necessary to rush out and enroll in an animation school. Why not venture online, download a demo, and add another tool to your toolkit? ☒

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Welcome to the first installment of Winning Ways 2001, profiling winners from this year's salon at the annual conference in Asilomar. This is my first installment as editor of this column, and I would like to take a moment to thank John Harvey for all his help as I take the reigns of Winning Ways from his capable hands.

Look for more winners in the next several issues of the AMI News. Enjoy!



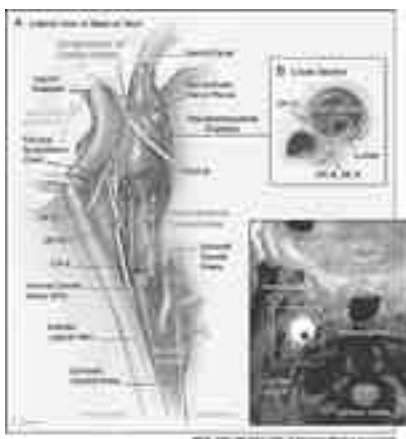
Liana won the **Certificate of Merit in Instructional Color** for her piece, **Canine Skeletal Anatomy**. The intended purpose of this chart is to provide an educational resource for veterinary students as well as for veterinarians to educate dog owners about canine skeletal anatomy. The piece began as a pencil sketch, which was then rendered in Adobe Photoshop 6.0. Text was executed in Quark Xpress 4.0.

Liana Bauman



Liana grew up in Arlington Heights, Illinois and in 1998, she graduated from the Biomedical Visualization program at the University of Illinois at Chicago. After graduation she was employed by Biomedica Corporation where she created medical-legal artwork. Liana is currently employed as a full-time medical illustrator by the Anatomical Chart Company located in Skokie, Illinois. Liana and her husband, Kevin, currently live in the nearby village of Palatine.

Cassio Lynn



Cassio is the winner of a **Certificate of Merit in the Instructional Color** category. The piece **Anatomy of Carotid Artery Dissection** is Figure 3 of 4 accompanying a JAMA Grand Rounds article entitled "Stroke in a Healthy 46-Year-Old Man," in the June 6, 2001 issue. The article presents the case of an individual who experienced a dissection of the internal carotid artery. The figure illustrates the involved anatomy and correlates with MR images of the case study. Media used are pencil and Photoshop.

Cassio is presently the medical and scientific illustrator at The Journal of the American Medical Association (JAMA) in Chicago, IL. He holds degrees from UNC Chapel Hill in 1996 and Johns Hopkins University School of Medicine in Baltimore, MD in 2000. Cassio has been a member of AMI since 1996.

Winning Ways

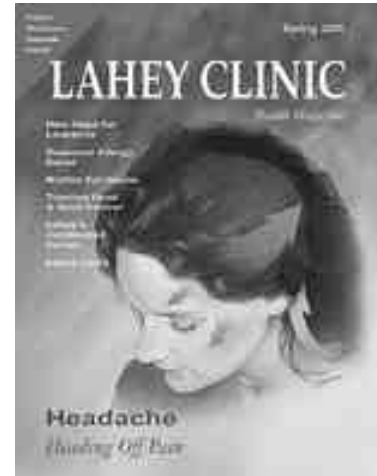
— continued



Jennifer was awarded the **Certificate of Merit in the Professional Editorial** category. The winning piece, **Headache: Heading Off Pain** was created as the cover illustration for the Spring 2001 issue of the Lahey Clinic Health Magazine. The image summarizes a glossary of headache types which are described in the featured article. Depicted are the sites of common headaches: migraine (originally shown in color with a blue arrow around the temporal region); cluster headache (shown with red arrows around the orbit); and tension type headache (shown with a yellow arrow up the posterior of the neck and ear). The anatomy is subdued in favor of a gentler portrait style to soften the subject matter for a general audience while maintaining medical sophistication for health professionals.

Jennifer received her M.A. in Medical and Biological Illustration from the Johns Hopkins University School of Medicine in '99. After graduation, she continued as a scientific illustrator for the Department of Entomology at the National Museum of Natural History. Jennifer launched her career as a medical Illustrator at the Lahey Clinic in Burlington, MA. She now runs her own full-time freelance medical illustration practice in Waltham, MA.

Jennifer Fairman



Lik Kwong



Lik won the **Award of Excellence in instructional Color** for his illustration on **Understanding Human DNA**. The illustration was created for use as a 20" x 26" poster to educate people about the basic concepts of human DNA. The project involved researching the topic, sketching, communicating with a medical consultant, rendering the illustrations, and layout design. The illustrations were created using Adobe Photoshop and QuarkXPress was used for the layout.

Lik earned his B.F.A. in Graphic Design and his M.F.A. in Medical Illustration from the University of Michigan. After graduation, he worked at the University of Michigan Department of Bio-communication and then at the Allison Legal Graphics Group in Miami, Florida. He currently resides in Chicago, working at the Anatomical Chart Company as a senior medical illustrator. There he produces new charts and products for educational and pharmaceutical clients.

Phil Mattes



Winner of an **Award of Excellence in Interactive Media**, Phil's **Tooth Morphology Interactive CD** was designed to be a stand-alone introductory course that teaches the basic morphology of adult dentition to first-year dental students. This program was designed by a team of university professionals including a subject matter expert, programmer, instructional designer, graphic designers, photographer and Phil, the medical illustrator. He produced over 100 continuous tone and color illustrations of practically every view of every tooth in the adult dentition. The illustrations were composed in Adobe Illustrator and Photoshop. The CD is currently in use by first-year dental students at the University, and New Mentor, a dental education software company, has been chosen to market it nationally and internationally.

Phil received his BA in Biology at Lehigh University in '83 and his MSMI from the Medical College of Georgia in '87. Following graduation, he accepted a two-year fellowship in Visual Communications at the Annenberg Center for Health Sciences, Rancho Mirage, California. Missing the four seasons, he headed back to the East Coast and accepted a medical illustration position at the Medical College of Virginia at Virginia Commonwealth University in '89, where he has been ever since.



Bill received a **Certificate of Merit in Animation** for a sequence he created: part of the Discovery Health Television special, **Breaking the Code: The Race to Uncover the Secret of Life**. This animation was created to educate a general audience about genes and how a malfunction in a gene can cause disease. David S.

Goodsell, Ph.D. author of *The Machinery of Life*, provided a reference illustration of the acetylcholine protein molecule. The animation also won First place in the 2001 TAACCL digital art competition and an RX Club 2001 Award of Excellence.

Wild Bill Matthews (MA, 1990 The University of Texas Southwestern Medical Center, Dallas) has created medical computer animation for over 11 years. In 1998 Bill founded LifeHouse Productions in Wallingford, Connecticut with partner Dena Winkleman. Bill and Dena are co-authoring a new chapter on 3D Animation for the upcoming edition of *The Guild Handbook of Scientific Illustration*.

Wild Bill Matthews



Thanks to all the artists profiled here for providing me with information about themselves and their artwork. See you in the next issue! 📧

— Jill Gregory

Calendar

Next issue

Other items

- **DECEMBER 21, 2001**
submission deadline for
Jan/Feb
- **FEBRUARY 21, 2002**
submission deadline for
Mar/Apr
- **APRIL 21, 2002**
submission deadline for
May/June

- **WINNING WAYS**
Jill Gregory
- **NEW COLUMN!**
DREAM STUDIOS:
AN ARMCHAIR TOUR
Chris Gralapp

If you are having an exhibit of your work, please let us know and we can publish a notice in the newsletter. Priority will be given to AMI members and events, but we would like to promote events in related areas.



The Association
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