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Pelikan's Antidisambiguation: The Vanishing Pervasive Network

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The Scholarly Publishing Scene — Permissions, *Oy Vey*

Column Editor: **Myer Kutz** (President, Myer Kutz Associates, Inc.) <myerkutz@aol.com>

"Copyright is a pain in the ass" — an internationally-renowned intellectual property attorney in tongue-in-cheek response to my complaint about the effort — always time-consuming, sometimes frustrating and occasionally disproportionally expensive — to secure permission to use in my handbooks not only material borrowed from other publishers but also drawings and photographs belonging to industrial companies, other organizations and individuals around the world, and in most cases of no value to them.

I suppose you can see where I'm going with this. But let me say at the outset that my visceral reaction at any particular moment to the attorney's statement (he's a good friend of mine, by the way) depends on which side of the copyright issue I'm sitting on at that moment. For example, whenever I find a chapter from one of my handbooks available on some Website free of charge, which does happen, I'm properly outraged. Someone's stealing from my publisher and me. On the other hand, when I add up all the effort it takes to round up permissions to use copyrighted materials in the fourth edition of a massive handbook that I edit, I rail against the fates, even though I understand perfectly well not only that I need to follow the letter of the law but also that I no more wish to rob anyone else of sales and royalties than I want them taken away from my publisher and me. I don't even want to use without permission a drawing of a generic component that was obtained from an industrial company for whom the drawing has no value. Rules are rules, and "information wants to be free" in this context only works when the source of the information explicitly grants permission for you to have his expression of the information for nothing.

The fourth edition I'm talking about here is that of the *Mechanical Engineers' Handbook* that I put together for **Wiley**. It's massive. There are four volumes, with a total of 112 chapters and well over 4,000 pages. A hundred and forty or so authors contributed to the handbook. It took two editorial assistants to get it ready for production. Permissions needed to be secured for well over 400 illustrations — line drawings and photographs — from a wide variety of organizations and individuals.

The handbook has been in continuous publication since 1986. As is typical for a handbook of the size and scope of this one, the new edition contains chapters that are new to the handbook, updated and unchanged chapters from earlier editions, as well as updated and unchanged chapters from other recent **Wiley** books of mine that fit well within this handbook. Permission specific to this handbook had to be secured for every borrowed figure, no matter whether the chapter that contains it is new or old, changed or unchanged, or where it originated. To facilitate the tasks of authors and editors, **Wiley** is using a new form with comprehensive language that requests permission to use copyrighted material "in all media of expression now known or later developed and in all foreign language translations and other derivative works published or prepared by **John Wiley & Sons, Inc.** or its

licensees, for distribution throughout the world, and also in versions made by nonprofit organizations for use by blind or physically handicapped persons." The company has told me that it is now keeping scrupulous records of permissions — in response, I surmise, to a lawsuit it lost several years ago in which its recordkeeping, among other things, was found by the owner of numerous stock photos used in a **Wiley** textbook to be lax. The bottom line for me is the hope that the firm's lawyers have devised language that will allow me to escape having to get a new round of permissions in future editions for material that was covered in this edition.

I can say that handbook chapter contributors are scrupulous in giving acknowledgment to an originator whenever anything is borrowed. Contributors put the words "courtesy of" before the name of the source of an illustration in the caption. Some figure captions are footnoted and end-of-chapter references have the details about sources. In addition, of course, there has to be a formal permission, and contributors' work-for-hire agreements clearly state that they have to obtain written permissions from copyright owners. It's additional work and in some cases, publishers will charge permissions fees (more about that in a future column), so I beg contributors to borrow as little copyrighted material as possible.

Nevertheless, there's always work for me, the editor. For example, one contributor, whose chapter appeared first in an earlier edition of the handbook and is being reprinted in this edition, died between editions. As a result, I had to chase down permissions for figures in his chapter myself. Ditto in the cases of some other contributors, reportedly still alive, although impossible to track down by either email or phone since the handbook went into production.

Securing permissions from industrial companies has provided a look into how corporations are mutating nowadays. I would find a contact at the company credited with being the source of an illustration only to learn that the division that had generated it had been sold to another company. Contacting that company would reveal yet another sale. In one case, that of a

line drawing of a generic furnace component, the sale of a French company to one headquartered in the U.S. is pending. If it goes through before I secure the permission, and I'm getting no response to repeated requests, I will probably have to go around again with a new team that will be focused on matters of more pressing interest to them than my need for a permission for a figure that has no value to them.

Some chapters have offered even more serious problems. One chapter, which originated in another book of mine, contained seventeen photos of industrial equipment culled from rather obscure companies and individuals from around the world. A new set of permissions to use the photos was required. After weeks of trying to get the lead contributor to reply to emails or return phone calls to him at the school to which he had relocated since he wrote the chapter, I managed to track down the junior contributor, who had also relocated to Europe. She contacted her mentor, and they said that they'd work on securing the permissions. After a couple of weeks of radio silence, I wrote to them, asking how they were getting on with the task. This was the lead contributor's reply from his iPhone: "We are not interested in publishing our chapter in future editions and thus will not be seeking permissions. Sorry." Another contributor has thrown in the towel in a different regard, writing: "I suggest that **Myer** goes ahead and uses the figures as we are in the clear, having written to them. If they do not respond then the ball is in their court. **Myer**, If you think it is impossible to proceed without the remaining permissions then we will simply remove those figures, but the text will obviously be altered." No doubt the production folks will find the promise heartwarming at this late date in the process.

Then there's the phone call, just yesterday, that I made to the staff attorney at the company which acquired the company that was the source for a figure in the chapter of the deceased author I mentioned earlier. The attorney told me that he had to make a small correction — whether to the figure or the caption, he wouldn't say — and that he would "get to it." He demurred from telling me when that would be. I hope it's before I join the late author on the other side of the grass. ⚘

Pelikan's Antidisambiguation — The Vanishing, Pervasive Network…

Column Editor: **Michael P. Pelikan** (Penn State) <mpp10@psu.edu>

At the time of this writing, we've just finished up **Google's** I/O developer's conference, **Amazon** has launched a phone, and everyone's waiting to see what **Apple's** going to do next (and by the time you read this, they'll have done it and everyone will be waiting to see what **Apple** is going to do next).

A few months ago, there was quite a bit of buzz around the phrase *"The Internet of*

Things." It seems old hat now, but in fact we've barely seen the bow wave leading its impending arrival. One thing that unites the recent product announcements from the giants occupying the landscape is that they're basically offering devices whose reliance upon ubiquitous, systemic access to huge network resources is the key to understanding these offerings.

As is my custom, these evolutions bring to mind for me product offerings from a simpler, bygone day — a day when the Things of which we speak today in *The Internet of Things* were connected… by wire.

I've observed before, although perhaps it's been awhile, that we can trace back one of the predominant facets of the current day and age directly to **Samuel F. B. Morse**.

Morse established himself first as a painter, indeed, maintained a studio in Charleston, South Carolina between 1818 and 1921, before moving to New Haven, Connecticut. Wikipedia, as usual, provides a good article here. It relates that in 1825, while **Morse** was in Washington, DC to perform a painting commission (a portrait of Lafayette), he received word via horse messenger from his father in New Haven, telling him, "Your dear wife is convalescent." **Morse** hurried from Washington to New Haven, leaving the portrait of **Lafayette** unfinished. But the journey from Washington to New Haven was far longer than today. Upon arrival in New Haven, **Morse** learned that his wife had already died and was buried. This was the genesis of his decision to explore a way to achieve rapid long-distance communication.

I would argue that the long-distance telegraph was the original instantiation of what today we would call Electronic Mail. Even in **Morse's** day and age, an electrical signal transited a copper wire essentially at the speed of light. The idea of representing alphabetic letters as a code employing on/off combinations that could be transmitted, received, and decoded back into characters changed everything.

The Civil War was fought in a battle landscape forever changed by the fact that generals frequently could be exchanging messages virtually instantly with their political supervisors. I find it difficult to suppose that the generals welcomed this new level of immediacy. Certainly they had to factor it into their thinking. The infrastructure to support such an enterprise was extensive. The operators on the telegraph networks were highly skilled and likely recognizable to each other by distinguishing characteristics on their keys. One can suppose that the sense of presence and connection the wired telegraph session was able to evoke was tangible and specific. Wires can do that.

That wired connection was still there as a few brave souls began experimenting with the early handheld computing devices that began to creep into the office landscape some fifteen or twenty years ago. We can probably trace the Personal Digital Assistant, or PDA, back to the first **Palm OS** devices, or the **Newton**, or perhaps even to the **TRS-80 Model 100**. One common element in each of these was a wired method of interconnection with a host device, typically over serial cable.

It was a huge breakthrough! Using the device away from the host, you could capture, access, and update notes, contacts, and calendar information, and then upon physical reconnection to your host device, "synchronize" changes between host and handheld. Applications were available that permitted one to synchronize the contents of email outboxes and inboxes, permitting you to "pick up" your email upon connection, read and respond to it on the handheld, then synchronize changes again to send your responses on their way over the host device's network connection.

At the heart of this capability is the idea of comparing the contents of information storage at both ends of the connection to determine what's changed at either end of the connection, then update appropriately. In this respect, the wired connection notwithstanding, we find the essential elements of today's landscape characterized as *The Internet of Things*.

At the **Google** I/O developer's conference, the digital watch took center stage. Yes, I know, we've had digital watches for a while — I'm referring in this case to "Smart Watches," interconnected via very-short-range networking with your telephone (why do we still call them telephones?) — essentially, a touchscreen terminal on your wrist. In this scenario the phone plays host to the watch. The phone itself has a relationship to other hosts, of course, all over the Cloud.

Well! We got this far into the discussion before even using the word "Cloud." So — what with that word? Well, for one thing, it suggests not just wireless connectivity between client and host system, but between client and a whole host of host systems! One does not have to know or think about the fabric of interwoven of host systems across which one's business is travelling. If you do stop to think about it, what you discover is that the Cloud is vast: literally global in scope, it can connect data from any individual device to any other individual device, as well as aggregate data from many and relay back to many.

Which brings us to **Whispersync**. Truly, **Amazon's** eBook place-keeping system is the *Internet of Things* writ small. It is a tiny instance of a vast, broadly applicable set of capabilities, and we've been using it for some time.

Spread it out among many "Smart" devices in your life and don't stop. See where we'll end up before long. Lose your car keys? They can text you their location. Nearly home? You house can turn up the air conditioning in the summer, or the heat in the winter, rather than keep it cranking all the time. Your music can pause as you turn into your driveway and resume over the house system as you come in the door.

And the telephone, or whatever we call it, is at the center of all this, at least from the

user's perspective. The first thing you look at when you awake, the last thing you see before going to sleep, it watches over your interests day and night. It is the hub, the host, the top of the pyramid. Is there any wonder at **Amazon's** interest in such a device wearing their brand?

But your phone is just one minion in an unfathomably large swarm of minions, all connected to the ever-growing array of host systems constituting the Cloud, and through them, interconnected with each other.

The advent of IPV6 ushers in a new era. This is the latest version of the Internet Protocol, or IP (worth Googling, if you're not familiar with it). Under IPV4, presently in place, there were 4.3 billion network address available. We've just about used all those up. Under IPV6, the number of address spaces is increased to 3.4 x 10 to the 38th power. Write it out – that's a very, very big number. Better yet, simply **Google** "2 to the 128th" and see. *The Economist* says this is "roughly 340 billion billion billion billion." The **Wikipedia** article on IPV6 says this is enough address range for every atom on the surface of the Earth to be assigned 40 unique network addresses. True? I sure don't know. But I wouldn't bet against it.

This means instead of simply having serial numbers for automobiles, we have could have unique identifiers for each and every part, every screw, every washer, in the car. Every bullet loaded or fired from every firearm — each with its own provenance. From an Internet-based retailer's perspective, imagine the incentive for self-reordering supplies in homes and business everywhere. RFID for library books? Child's play. Each and every volume can be its own network node, with an address and a knowable present location on the network map topology. And each and every behavior, each human/device interaction, adds to the veritable Niagara Falls of deeply minable device/content usage graphs. The Age of Analytics is only just beginning!

The network itself will have become largely invisible. We'll simply live in a world in which virtually everything "talks" with virtually everything else. Indeed, things will rely upon that capability just to function properly and as designed.

Of course, for all this to happen, networkable devices would have to shrink in price and size. But who's ready to stand and say that Wi-Fi and cellular devices are already as small and cheap as they're going to get? Cellular and Wi-Fi? These are just way stops along the path to the true *Internet of Things*. I think all this future-stuff will happen a lot sooner than we might think, certainly in a whole lot less time than it took us to get from **Samuel Morse's** telegraph to where we are today. It's probably not a gross exaggeration to suggest that one will be able to create a network-connecting subassembly simply by printing it. Network connectivity will add

pennies, at most, to the price of a product — nothing, really, compared to the irresistible value added from the vendors' perspective once every consumer item bought and sold on the planet will be able to phone home and tell the folks how it's going...

My guess is that there will be virtually no facet of day-to-day life left untouched by the emergence of constantly-connected Cloud-based commodity devices embedded in an ever-increasing array of products with which we interact daily. I believe that try as I might, I probably cannot successfully or unrealistically over-exaggerate the applications and reach that we will see for such technologies. 🌴

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against the grain

people profile

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BORN AND LIVED: Born in Fairview, Ohio in 1982. Grew up on a farm in rural North Arkansas until graduating high school. Moved to Florida to attend college and have lived here for 13 years.

EARLY LIFE: Arkansan pastoral splendor. Spent most of childhood in and out of dance classes and with my nose in a book. Attended **Florida School of the Arts** for a degree in Dance and then **Florida State University**, where I changed my major to English and never looked back.

PROFESSIONAL CAREER AND ACTIVITIES: Graduated with M.L.I.S. from **Florida State University** in 2010. Immediately began working with **Ingram Coutts**, a global book vendor, as a Collections Consultant. After three-and-a-half wonderful, challenging years with **Ingram**, I was eager to get back into the library and was thrilled to take a position at **Rollins College**. Member of **ALA**, **FLA**, **ACRL**, and **ALCTS**. I've had the opportunity to attend and present at numerous conferences over the past four years, including **ALA** annual, **AALL**, **SEAALL**, **FLA**, and my favorite, **Charleston**.

FAMILY: I am the mother of a demanding and affectionate 5 year-old cat, Neko.

IN MY SPARE TIME: I love to travel, hike, and enjoy the natural offerings of new cities and countries around the world. I try to attend as many theatre, dance, and literary events in and around Orlando. I love to cook and then eat too much of what I cook. I take ballet, swim, run, and do yoga to feel better about eating everything I cook. I read, smell, and love books.

FAVORITE BOOKS: *Orlando* by **Virginia Woolf**, *Cloud Atlas* by **David Mitchell**, *Island of the Blue Dolphins* by **Scott O'Dell**.

PET PEEVES: Tardiness, adverbs, and Jeopardy contestants who do not finish an entire category before moving on to the next.

PHILOSOPHY: All global citizens should have the ability to access information. Knowledge is power, and reading is one of the universal joys that make our small lives even bigger and better. On personal philosophy, I believe empathy is key. We're all in this together.

MOST MEMORABLE CAREER ACHIEVEMENT: Achieving this marvelous position at **Rollins**.

GOAL I HOPE TO ACHIEVE FIVE YEARS FROM NOW: Professional: establish myself as a key leader in streamlining e-resource management in the 21st century while contributing to the stellar body of library scholarship through open access avenues. Personal: become a wildly successful Jeopardy contestant.

HOW/WHERE DO I SEE THE INDUSTRY IN FIVE YEARS: I see academic libraries evolving to include services previously held by other campus departments. We will continue to be leaders in educating our campus and distance-learning communities on digital tools and information technology. We will continue to be the hearts, brains, and safe spaces of our communities while wowing new generations of patrons who may not be bound to antiquated ideas of what librarians do. We will shrug off the confines of our physical spaces to become recognizable faces in our communities. We will continue to be activists and educators on global issues like intellectual freedom and open access initiatives. And most importantly, we will continue to instill a love of reading and lifelong learning in everyone we touch. 🌴