



product development
technologies, inc.

PULSE

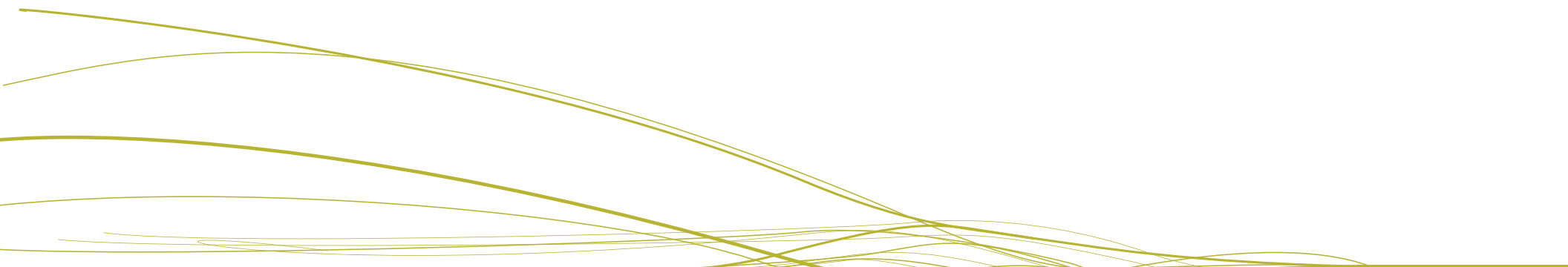
A bi-monthly publication by PDT

Issue 1
February 2008



In this issue:

- Have Patients: Ideas to Heal the Healthcare Experience Now
- Homeward Bound: Electronics Find a New Place

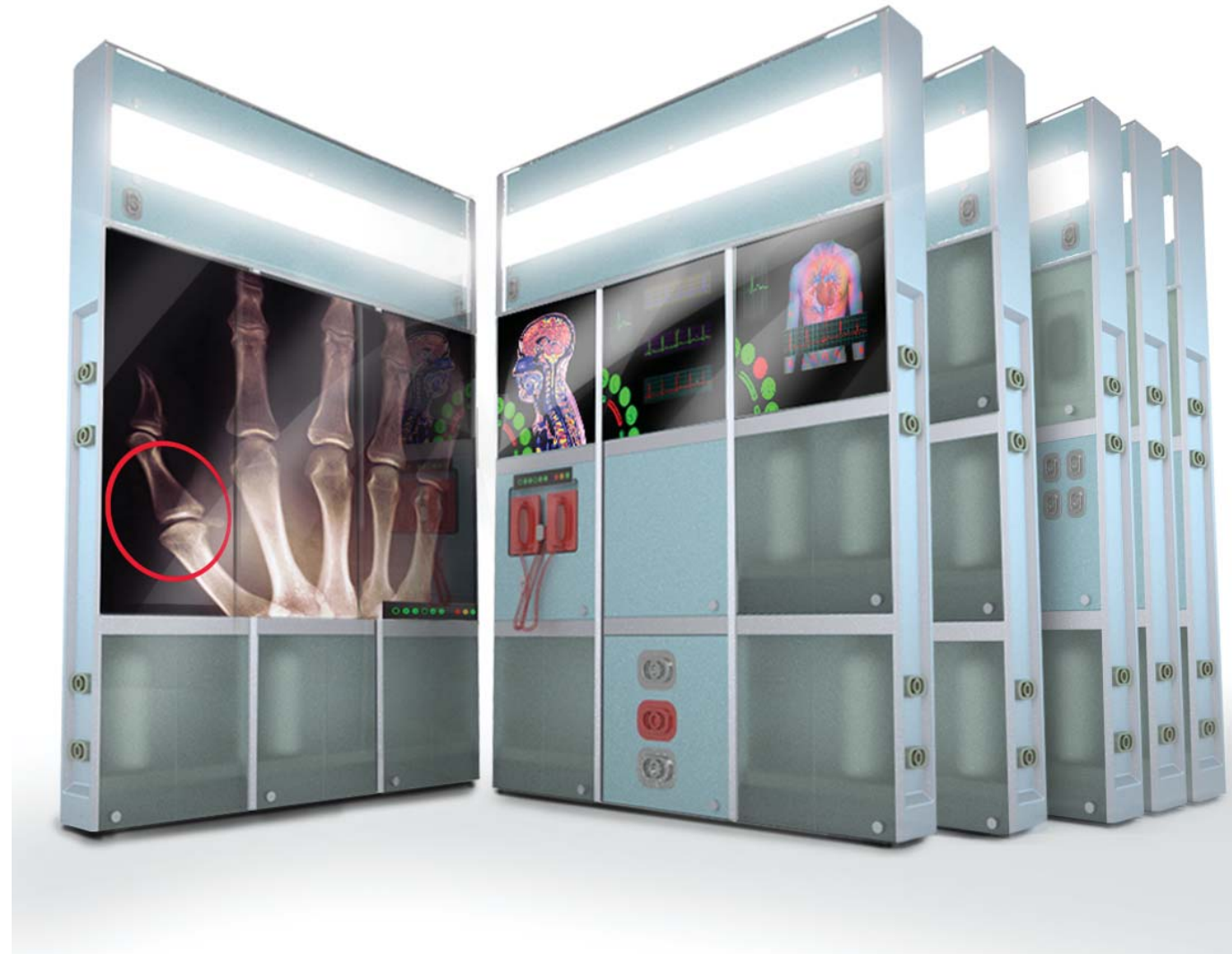


Have Patients: Ideas to Heal the Healthcare Experience Now

In 2007, a PDT team member had the unfortunate experience of an extended stay in a downtown Chicago hospital. From the run up to admission, to the time of discharge and subsequent follow-up treatment, the sequence of events- or more accurately the discontinuity within those events- provoked the need to raise many questions about the workflow and environments for healthcare in the 21st century, which still today rely heavily on practices and processes seemingly established around the Victorian era.

Looking forward, PDT proposes a future where healthcare will be connected; it will be efficient, unobtrusive, informed and secure. Technology will streamline workflow and caregivers will have the time to be personal on approach as technology takes the strain. Connectivity will allow a collective intelligence to work proactively from virtually any location.

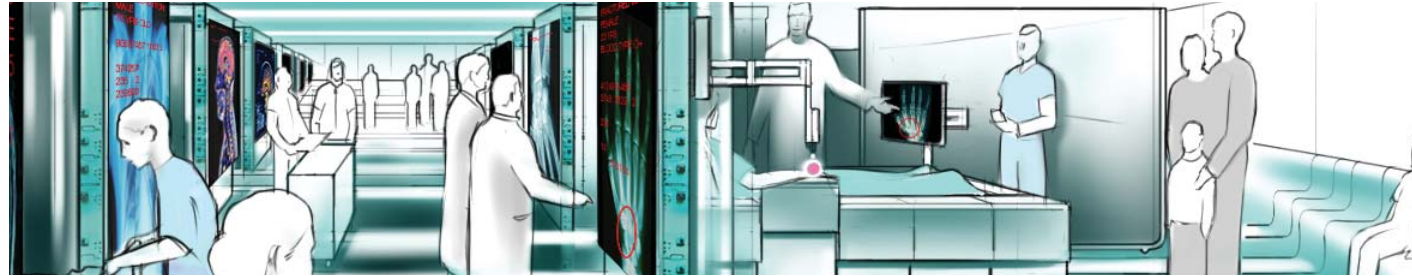
'Mediwall' will be the face of the connectivity and the primary hub for care. It will provide the ability to rapidly construct custom environments for diagnosis, monitoring and care with little or no reliance on established infrastructures. Full service standardized and connected healthcare will be available in traditional care centers, retail environments and as emergency installations in war zone or hostile environments.



It's no secret that the healthcare industry in the U.S. is about to experience one of the biggest strains it has ever encountered; the boomer generation is about to retire and will eventually require more intense medical services. People are living longer and serious illnesses are being suppressed or treated more successfully. Figures also reveal the number of professionals leaving the industry is at an all time high, whilst those transitioning in is at an all time low. Healthcare workers are aging and demand is rising. This calls for an evolution in thinking to meet the demands of the changing landscape.

The internet has been the enabler for unprecedented advances in productivity and personalization, from designing your own sneakers to real-time management of global operations. Connectivity, wireless access and standard protocols have opened up an infinite amount of opportunities for all industries, yet healthcare still relies heavily on repetitive manual operations, paper dependant procedures, stand alone computer systems and disconnected treatment methods.

'Mediwall' is a modular system used to construct the multiple elements required for 21st century healthcare. Seamless connectivity will be enabled by Intevia®-internet connected, remotely controlled intelligent fasteners and sensors, securing components while controlling and communicating with other circuits and



equipment and sensing their environments, (available today through TZ Limited). 'Mediwall' and Intevia® will enable a fully connected streamlined workflow for healthcare beyond traditional care environments. The widespread use of connected technology will eliminate fragmented processes and allow a lifetime of treatment to be instantly referenced improving workflow and efficiency. The quality of environment for both workers and patients will be greatly enhanced, accelerating growth and reducing patient recovery times.

Equipment and devices will also have embedded intelligence, continually sensing patient statistics and their environment, not dissimilar to the abilities that many vehicles on the road have today. They will be programmed to react accordingly or take command remotely without the need for displacing a caregiver from their location, increasing reaction times and reducing fatigue. The pressures of patient to caregiver ratios will be alleviated as one caregiver will have the ability to remotely

access and respond to a patient real-time from any number of wirelessly connected devices, decentralizing costs and workforces.

Currently, it takes approximately three minutes to verify a patient's insurance eligibility via the phone or web upon admission. RFID tagging and biometric scanning will verify eligibility automatically as you arrive or enable a patient to 'check in' from home online. Insurance companies and care providers will be encouraged as cost reductions are dramatically reduced due to connectivity, speedier diagnosis and treatment. Providers will share the necessary information with insurance groups for them to determine coverage and costs accurately and in a timely manner. The rapid evolution of telehealth services will allow patients to be treated and monitored from home, linking them real-time via the internet to their informed primary healthcare providers. The advent of e-records and telehealth monitoring will enable patients and caregivers to automatically be sent emails of weekly or monthly progress with reminders of follow-up schedules. Recommendations on ways to optimize health will be sent as regularly as e-statements, all based upon the data gathered.

Patients will be equipped with a 'dashboard' providing unprecedented freedom and accessibility while replacing multiple control and communication devices found in today's care centers. As a web enabled device, the



'dashboard' allows patients to remain connected throughout their experience, offering a means of communicating with loved ones and caregivers, controlling and accessing media, entertainment and their immediate environments. The dashboard will also enable caregivers to manage diet and medication cycles by connecting to dispensers and trays and controlling their sequence times and dosing. RFID technology will ensure the right medication is only dispensed to the correct patients, eliminating error.

Personal experience is very often the most dynamic catalyst for evolution. PDT began to identify patterns and once the causes that affect those patterns were understood cues from parallel industries and solutions began to present themselves. The 'Mediwall' environment is the interface to a streamlined workflow that extends possibilities, improves efficiency and increases the quality of experience for both care givers and patients.

-Tim J. Morton & Clifford Krapf

Homeward Bound: Electronics Find a New Place

As we walked the spectacle that is the Consumer Electronics Show, we were struck by an ironic observation- a lot of electronics manufacturers are now trying to help you find your 'quiet place.' Sure, there were lots of really thin TVs, electronics that claim to be 'green' in some way or another and an almost obscene looking arsenal for your Wii, but our most surprising observation (to us at least) is there was a little less in-your-face 'loudness' and a little more 'quietness'. While Qualcomm wasn't really showcasing any product in particular, their booth was like a soothing retreat in the midst of trade show chaos- tall grasses, comfy seating and free coffee! Home settings, where people typically try to find tranquility and escape, were the setting for many manufacturers to display their wares- Samsung showcased portable devices all over their 'home', while Logitech showed off new keypads and mice that can be comfortably used while relaxing in bed. Kodak softened up their 'living room' with electronic photo frames that flashed family photos. All seemed an interesting departure from the more typical 'get pumped up, play it louder, make it sleeker' anthems of the past... so what could this mean for the industry?

Future Implications

Work is no longer a 9 to 5 job. It has not been for years and the corporate world is well aware of it. For most of us, work begins the moment we wake up until the moment we fall back to



sleep. Major companies are investing heavily into researching and designing around the needs of this newest generation of the global workforce who works both in the office and at home.

If electronics are going to be designed to help us relax and get comfortable while fitting nicely within our home setting, we foresee a continuation of the soft color palettes

with hot bold accents that we've seen in recent years. We would also not be surprised to see the increased usage of natural materials (or synthetics that imitate natural materials) ... wood, leather, cloth. Lovely art, like seen on Microsoft's new Zune, may begin to be offered in some fashion on all sorts of gadgets used in the home to better incorporate into home decor. Soft goods

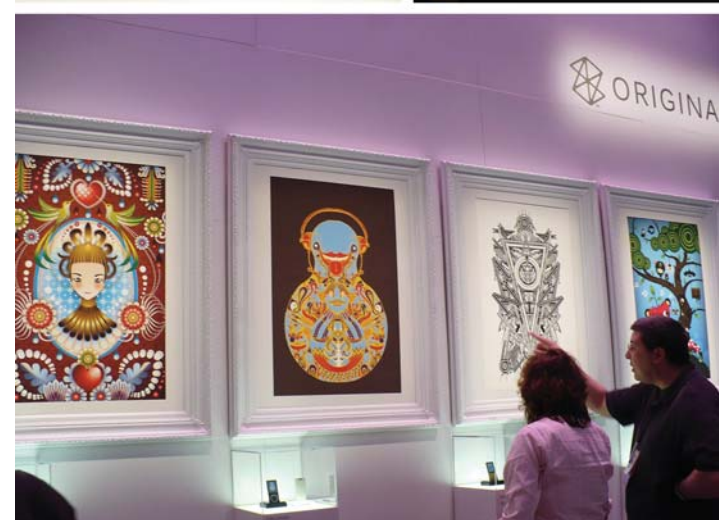


will continue to be in the forefront of manufacturer's minds as important accessories, modes of storage or even display of home electronics. Belkin is doing a beautiful job with their new lines that boast gorgeous colors, fabrics and adornments that are artfully stitched.

Also on the horizon is the increased usage of the word 'GREEN.' Nokia, Dell, and Samsung were some of the participants at the show that were using the word and were trying to inform buyers and users how they are playing a role in saving the environment. It is a nice attempt and nice to see that they at least know some of the new hot marketing words that are attracting people. We believe an honest effort from a majority of manufacturers will be attempting 'green' ideas to their products.

What is beautiful about the future of consumer electronics is that products geared to work are also geared to home- but that's what is also ugly about the future. What was once a distinct line is now blurred.

-Gilberto Cavada & Sona Patadia





product development
technologies, inc.

About PDT

At PDT we believe the success of a project relies on our team members' insight into today's product development issues, advances, technologies and trends. Therefore, we actively seek out information constantly to stay savvy to the issues and opportunities facing our clients. Our global team members use these insights in our work, resulting in products and strategies that make our clients succeed in bringing new products to market that spark desire and that inspire, directly affecting their bottom line. We are happy to share just a few of our team members' insights, observations and opinions with you in this publication. For more information, please visit us at www.pdt.com or contact us.



PDT Lake Zurich

p 847 821 3033

PDT Minneapolis

p 763 694 8851

PDT Austin

p 512 244 1795

PDT Oxford, UK

p +44 (0) 1844 278 000

PDT Chicago

p 312 440 9404

PDT Fort Lauderdale

p 954 428 3404

PDT Los Angeles

p 310 601 7167

PDT Lviv, Ukraine

PDT Shenzhen, China

This Issue's Contributors

Gilberto Cavada has been designing for 10 years and has been involved in all types of industries; both commercial and consumer. 'My passion is my family; my strengths are delivering what I promised and what was desired; my ambition is to constantly reinvent myself without losing the lessons learned; and my weakness is fast cars.'

Clifford Krapfl is a creative Industrial Designer with a strong Fine Arts background. This unique approach has led to Cliff contributing on many conceptual projects and his focus is on the far-reaching potential of every program.

Tim J. Morton is passionate about knowledge, family and adventure. Design Manager at PDT-Austin, Texas, Tim quickly discovered how experiences outside of your regular 'lifesphere' can lead directly to breakthrough ideas for design, business and life. 'Don't be afraid to step out once in a while!'

Sona Patadia has discovered a passion for designing soft goods. She's had the opportunity to really begin to explore the freshness of working on soft products and discover a keen interest in them. 'Design can be so many things, it would take a lifetime to discover them all...so take chances and push the limits of your knowledge base, you never know when it will lead to a new passion.'



Gilberto Cavada, Clifford Krapfl, Tim J. Morton, Sona Patadia

askpdt@pdt.com
www.pdt.com