



Video Inspection Technology: Drain Cleaning With a View

<http://www.facilitiesnet.com/plumbingrestrooms/article/Video-Inspection-Technology-Drain-Cleaning-With-a-View--14534>

Front-line technicians were diagnosing and removing blockages from drains and piping systems in institutional and commercial facilities long before video-inspection technology emerged. But with video capability, they no longer have to play the guessing game.

"The old-timers knew what the facilities were like and guessed the problems," says Marty Silverman with General Pipe Cleaners.. "Now, with a camera, you don't have to guess and can learn exactly where the problem is. It's a great advantage for diagnosing problems."

While video inspection is a newer technology, running out to purchase the most expensive and technologically advanced camera is not always a financially sound investment for maintenance and engineering managers. Managers must consider a facility's age, activities and operations - not to mention the size of the piping system - when specifying drain-cleaning equipment.

Benefits of video

Video-inspection cameras emerged as a realistic option for technicians in the late 1990s, when cameras became smaller in size, Silverman says.

Now, he says, "The price has gotten to the point where it's gone down, and they've become even more compact to be a portable camera system. That, of course, has improved at a rapid pace as well. You used to record on VHS tape. Now it's on to a USB or a flash drive."

Most drain-cleaning cameras generally have the same design, but there are differences that distinguish them, Silverman says.

"All camera systems put a miniature TV camera with lights inside a waterproof enclosure," he says. "The camera is attached to a pushrod with a fiberglass core and wires carrying power and the camera signal back to the surface. The images are viewed on a monitor and may be recorded." Additional camera system features often include: the ability to self-level so the cameras are always right-side up; pushrods that protect wires from water damage and go as long as 400 feet; small monitors that offer digital images; and the capability to easily target difficult blockages in pipes. The ability to diagnose recurring problems is one of the



primary benefits of using video-inspection systems for drain cleaning.

One situation that might warrant an inspection camera is, "a drain line that clogs on a regular basis," says Mark Speranza with Electric Eel Manufacturing. "A camera can identify a collapsed or broken pipe so the problem can be fixed. Routine inspections can also be performed as a preventive measure to ward off a problem before it occurs."

Video capability makes it easier for technicians to see the type of blockages in question, instead of having to guess at the problem.

"Video inspection allows you to see the type of blockage you're dealing with and pick the appropriate tool to deal with that blockage," says Joe Schaper with RIDGID. "If you're dealing with roots, you have to use the proper cutter head. If not, you'll be there all day and not clear the blockages."

Video inspection cameras also have become valuable instruments for conducting inspections prior to selling a building or showing proof of properly completed work.

"My biggest thing is the proof of work," says James McGregor with RIDGID. "It's a very compelling statement when you can tell someone where the problem is. It's evidence you're not trying to take them for a ride when getting a repairing or cleaning. The proof is here there's a problem, and here's what the problem is."

Knowing the direct cause of a blockage can potentially save facilities thousands of dollars in maintenance costs.

"If (a technician) is guessing, he'll tear up a lot of ground and it will be costly, whereas with a camera he'll know exactly where the problem is and only dig up what he has to," Silverman says.

Fashion and Technology

Similar to the way cars have become less of a pollutant, with the maturity of engineering and the emergence of trendy solar hybrid cars with clean gas emissions, fashion practices are also becoming more eco-friendly.

At the forefront of this trend is 'DPOL (Direct Panel on Loom)' technology, also called Smart Tailoring. Created by Indian designer Siddhartha Upadhyaya, this way of production increases fabric efficiency by about 15% and reduces the lead-time by about 50% to produce high quality fashion garments.

What exactly is this?

The technology involves a computer attached to a loom in which different data like color, pattern and size related to the garment is entered.

The machine weaves out the exact pieces, which just needs to be stitched up, for the person who would wear the garment. Practically "weaving, fabric-cutting and patterning" gets over in a single process.



Not only does DPOL minimize immense waste of fabric, it also helps in saving energy and water [70%-80%]. It even reduces the amount of dyes and chemicals, harmful to the environment, used in the various steps involved.

What scientists are doing currently?

Currently, scientists are developing textiles that do not harm people or the environment, with new polymer chemistry that doesn't depend on non-renewable resources. Manufactured fibers, such as micro fibers, are now ahead of natural fibers in comfort, durability, and suitability to specific needs.

Smart fabrics describe materials that enhance the features of clothing and adapt to the external environment.

Some examples of smart fabric

'Brookstone Inc.', recently introduced a pair of cargo pants with heated carbon fabric panels in the seat and pockets that would work to keep you warm when trekking through cold winters. Companies like Wild Planet Toys Inc. Offer smart fabric lines like Hoodio that allow you to dance your way to work with their radio jacket.



Designer Angella

Mackey has expanded her line of gorgeous illuminated coats to her Vega Collection. Moving beyond jackets, her line now includes smocks, capes, and even illuminated scarves to keep you fashionably safe on the roads.



Suzanne Lee, fashion designer and TED fellow has been creating a kombucha-based material that can be used like fabric or vegetable leather to make clothing.

Pro snowboarder William Hughes wears a full body LED suit.

German microbiology student turned designer Anke Domaske has been using milk to create a new fabric called QMilch.

Californian high-tech sports apparel company Virus made their Stay Warm line of cold-weather clothing from recycled coffee beans.

The future of fashion technology is positive and bright, literally. The use of LED lighting in fashion has been both artistic and practical in usage.

This article has been contributed by a KTI student for Teclick. KBytes thanks the KTI, Academics Team for sharing this article and looks forward to such proactive participation from all members of the Kohinoor family.

9 Health Tech Companies Changing The World

<http://www.forbes.com/sites/ilyapozin/2014/06/01/10-health-tech-companies-changing-the-world/>

Healthcare is such a bloated and bureaucratic industry that, at first glance, it might seem immune to disruption by innovators. But a new crop of tech entrepreneurs is trying to change that. Their products range from apps and social networks to robots and complex simulators. But they all share a common goal: to leverage new technology to fix an old industry. Here are 10 of today's tech startups that are changing healthcare and the world:

ReWalk

After an accident left Amit Goffer in a wheelchair for life, he started developing a system that would enable people with spinal cord injuries to walk again. It took more than a decade, but now the ReWalk exoskeleton is available to consumers at a price of \$69,500. The ReWalk is basically a battery-powered set of legs. Users strap it on and then use crutches to balance as they walk. One of the primary goals is to allow people who have been bound to wheelchairs to meet the world "eye-to-eye" again. But the system provides real mobility, as well as positive metabolic effects and increased functionality, too. In 2012, a 32-year-old woman who'd been paralyzed from the chest down used a ReWalk to complete the London Marathon in 17 days. The system is available internationally and pending FDA clearance in the U.S.



Telesofia

Only about half the numbers of patients properly understand some medication instructions, even when they are as simple as "take one pill every four hours." That's the startling fact that led a team of doctors and techies to found Telesofia, an Israeli startup that enables doctors to provide personalized instructions to patients in easy-to-understand videos. The videos, which can be pushed to any device, use illustrations and everyday language to make sure that doctors' orders turn into action at home. They also filter out irrelevant information, so that a 65-year-old man doesn't get sidetracked by medication warnings intended for breastfeeding mothers. So far, Telesofia is working with \$1.5 million of funding and as of May it had a Series A round open.

Totally Pregnant

Pregnancy mobile apps have become a booming segment of the app market, with offerings that include week-by-week pregnancy trackers, diet managers, and even belly selfie functions. A new entrant, TotallyPregnant, seems to have rolled all of its competitors functionality into one, while adding powerful location-based technology and the first-ever 3D fetus animation videos. The app has an elegant interface centered on a simple navigation wheel. Functions include personal photo albums, informational videos, expert advice forums, baby gear shopping and a weekly pregnancy tracker. The app is free but generates revenue with links to online stores and in-app purchases of classes like Lamaze and yoga for pregnancy.

Surgical Theater

A neurosurgeon and two former air force R&D officers, founded Surgical Theater to bring flight simulation technology to the operating room. ST's Surgical Rehearsal Platform (SRP) uses MRI images and CT scans to render 3D virtual models of patients' brains. Surgeons then use two joysticks that control virtual surgical tools to practice operations before they perform them. The goal is the same as it is for air force pilots



using simulators: make the mission familiar before it counts. Since the SRP secured FDA approval last February, a number of leading hospitals have installed it, including Mount Sinai, the Mayo Clinic, and NYU and UCLA hospitals. The company's second product, applies the technology from the SRP to an operating room navigation system that allows surgeons to peak behind arteries and other structures using a 3D virtual model while they're in the middle of an operation.

Patients Know Best

As Dr. Mohammad Al'Ubaidli received care from many different providers for a rare genetic condition, he realized that no one had a complete picture of his medical treatment. There was little he could do to change this because he didn't have easy access to all of his medical records. That's why he built Patients Know Best a platform that keeps medical records in the cloud and in the control of patients. It enables patients to show doctors their complete medical history and, as a result, promotes personally tailored care. Patients Know Best, which has raised more than \$1 million of funding, has been promoted by a number of UK hospitals and is working on establishing a foothold in the US.

Contd. on page 4

Contd. from page 4

iCouch

iCouch uses videoconferencing to connect mental health professionals to patients. The entire interaction—from booking to payment—occurs online which means that mental health professionals can reach patients anywhere in the world. The ease of use, and the fact that you



don't even have to get off your couch, eliminates obstacles that prevent some people from getting needed treatment. These are welcome developments for a branch of medicine that suffers from a severe shortage of providers and a stigma that keeps away some people in need of help.

HelpAround

People living with diabetes usually have to carry around and use a toolkit of medical equipment every day. But what if you run out of glucose tabs or forget your test strips at home? HelpAround's mobile app connects users to others in the area who might be able to provide missing supplies or even help with a blood test or an injection. The app also serves as a community for advice and support. The next iterations of HelpAround, supported by a recent raise of \$200,000, will branch out from diabetes to create networks of helpers for people with other chronic diseases and food allergies.

Doximity

The LinkedIn for doctors, Doximity is a professional network for US physicians. It works like any social network, except with special functionality tailored to medicine. One of the

most powerful functions is the HIPAA-secure platform that enables doctors with various specializations to collaborate on difficult cases. Today the network has more than a quarter of a million members thanks in part to a unique compensation model. Market research firms contract Doximity users for rates of up to \$500 an hour to give advice about new medical devices and other healthcare products. The valuable members have led to serious funding. In April, the social network closed a \$54 million round.

Fitocracy

The founders of this social network were out-of-shape gamers until they applied some of their videogame acumen to exercise. Now they're ripped bodybuilders. Fitocracy is their attempt to help others follow a similar path. The network taps into the same compulsion-inducing format that make video games so addictive: when Fitocracy users log workouts on the site, they earn points that help them progress through levels. There's a multi-player aspect, too: Fitocracy's more than 1 million users can challenge each other to achieve fitness feats, such as running a certain mile time or completing a heavy lift.

Gizmo Talk

Livescribe Echo Smartpen

<http://www.livescribe.com/en-us/smartpen/echo/>

The Livescribe Echo Smartpen allows you to record audio while you're taking notes, and then play them back later. You can save and share interactive notes to your computer, iPad or iPhone via a micro-USB connector that also allows you to recharge your pen. The memory storage holds 400 or 800 hours of recorded audio, depending on the model, and includes an OLED display that makes it easy to navigate smartpen apps.

The user can choose to record audio in addition to the handwritten text. Recorded audio is kept indexed with the handwritten text—tapping on a written word starts playback of the recorded audio from that part of the recording.

The smartpen allows the installation of as many applications as there is memory, and ships with several applications. If tapped on the correct images, it can function as a calculator, for example, or can translate words (the translator software as shipped includes only 21 words in a small selection of



languages - as of September 2010 there are no public plans to make a full version of this translator available.

The product was initially available only for use with Microsoft Windows-based computers, but Version 1.0 of Livescribe Desktop for the Mac was made available via download in March 2009. It requires OS X 10.5.5 or higher. Handwriting recognition functionality is provided by a third-party application, MyScript by VISION objects Inc., which sells separately.

iBeacons...A New Technology for Hotels to Embrace

<http://stayntouch.com/ibeacons-new-technology-hotels-embrace/>

Knowing who your guests are has been part of the fabric of hotel service since the beginning. Knowing exactly where your guests are is something new and something that presents fantastic opportunities...for service, for a guest to personalize their experience or even for marketing, enabling guests to receive relevant promotions based on their specific location on the property.

iBeacon is the trademark for an indoor proximity system that Apple Inc. calls "a new class of low-powered, low-cost transmitters that can notify nearby mobile devices of their presence. The technology enables a smartphone or other device to perform actions when in close proximity to an iBeacon. iBeacon technology works using the Bluetooth Low Energy (BLE) technology, also known as Bluetooth Smart.

- The hotel can offer guests self-guided tours with information about a piece of art or about the particular room the guest happens to be standing nearby.

- How about having guest rooms automatically adjust the temperature and lighting upon entry?

- Guests could have a map of the hotel and always know where they are and how to get anywhere... think of GoogleMaps for inside the hotel.

- As guests are departing the hotel on day of departure, a notification can pop up on the guest's mobile device asking if they're checking out and if so, would they like their bill emailed.

- Guests can receive promotions based upon where they are on the property. If walking by the restaurant or the spa, specific notifications



can pop up on the guest's phone with an offer for a two-for-one appetizers during happy hour or for a discounted massage during a slow period in the spa.

- Leveraging BLE, the guest's smartphone can become the room key

When thinking of casinos, resorts and large convention hotels, the possibilities are dramatic. But what if the guests are not comfortable having their location known... regarding any concerns about privacy, the guest can turn off Bluetooth or choose to disable the location based services or the push

notifications.

While this sounds far off, it isn't. Marriott announced in July the deployment of iBeacons technology in a hand full of hotels. Hilton and Starwood have announced plans to leverage BLE. Virgin Atlantic announced in May'14 their plans to deploy iBeacon in their airport terminals to offer all kinds of perks for their travelers.

Finding the right balance between improving the guest's experience, choice of service and privacy concerns will be the real trick in leveraging these emerging technologies.



August Smart Lock Gets Key Exposure in Apple Stores

<http://www.technewsworld.com/story/81195.html>

The August Smart Lock will become available for purchase at Apple retail stores in the United States starting this week, the company announced on Tuesday. Priced at US\$249.99, the smart device uses Bluetooth and a mobile app to create a virtual key.

It has been shipping since late August in limited quantities to those who ordered it online, but it currently is backordered, with delivery expected in 90 days. International distribution is planned for the near future.

Logitech Integration

The August Smart Lock replaces the interior portion of users' existing deadbolt locks but does not require users to change their exterior door hardware; their physical, metal keys will work with the deadbolt as well.

The device is powered by four AA



batteries and can be installed in about 10 minutes, August said.

Once in place, the smart lock allows users to control access to their home via smartphone. They can provide temporary or ongoing access to select others at will, including creating invited guest lists from their contacts for a party or event, for example. Log records show who has entered and exited. A guestbook feature, meanwhile, lets users write thank you notes, leave instructions and invite comments. Last month, August added integration with Logitech's Harmony line of home automation products as well.

Kwiz

Q1. To whom was the first patent for a technical invention awarded?

1. Christiaan Huygens, mathematician and engineer
2. Filippo Brunelleschi, architect and engineer
3. Leonardo da Vinci, artist and inventor
4. Sir Christopher Wren, architect and scientist

Q 2 What company bought youtube in 2006 for \$1.65 billion?

- | | |
|-----------|--------------|
| 1. Google | 2. Excite |
| 3. Yahoo | 4. Microsoft |

Q3. In computer terms what does 'LLC' stand for?

- | | |
|-------------------------|-------------------------|
| 1. Lap link controller | 2. Logical Link Control |
| 3. Limited Link Company | 4. Long Lasting Cache |

Q4. Which famous company developed "vPro"?

- | | |
|----------|------------|
| 1. ATI | 2. AMD |
| 3. Intel | 4. Phoenix |

Q5. Q What does the abbreviation URL stand for?

1. Universal Random Locator
2. Uniform Resource Locator
3. Ultimate Resource Locator
4. Unified Real Location

Q5. What is the most common platform used to read PDF files?

- | | |
|----------------------|------------------|
| 1. Microsoft excel | 2. Adobe Reader |
| 3. Internet Explorer | 4. Adobe Acrobat |

Answers of September issue

- | | | |
|-----------------|-------------|---------------|
| Q 1. Hyper text | Q 2. Google | Q 3. Ericsson |
| Q 4. Rovio | Q 5. China | |

Tech trivia

- Alien Robots used in famous Transformers movies are so huge, that if all robot parts are laid out end to end, it would stretch from one side of California to the other, about 180 miles.
- 70% of virus writers actually work under a contract for an organization.
- Up until the 14th of September, 1995, domain registration was free
- Steve Jobs was Disney's largest individual shareholder.
- John Tukey coined the term 'bit' for the smallest element of information, namely an off-or-off binary state.
- The company name 'Motorola' means sound in motion.



Please send in your articles and feedback to kbytes@kohinoorgroup.co.in