A Guidance Portal - Plan your career:



The most common question, since we were kids, has been "What do you want to be when you grow up?" Though an answer always came readily then, now when it is time to pursue your desired career – it's time for confusion. To ease your confusion, we present to you our newest feature – "PLAN YOUR CAREER" – A guidance portal just for you. CADD Centre Guidance Portal is special because it is uniquely designed just for budding engineers.

Plan your Career is a page where you can use the tool provided to chart out your own career map. The module will inform you of the qualifications and skills you need to pursue a career of your choice. The user-friendly module will also provide you the narrowed down options of courses pertaining to your degree. This is a trusted guidance portal because it is backed by CADD Centre's years of experience.



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Featured INSIDE



MORE TECHNOLOGY



Feeling' Virtual Objects in



CADD Quest 2015



Test dates: 10,11,17,18,24 & 25 Jan 2015















Engineering Tools



Ask most engineers about the possibility of running their CAD or CAE programs in the cloud and you're likely to get a blank stare or an earful about why the software delivery model poses problems. Critical design IP (intellectual property) isn't safe in the cloud, they contend, or they question whether graphics-intensive applications like CAD can run optimally when solely dependent on Internet bandwidth. Many are quick to shrug off cloud computing as just another passing technology fad.

Major players in this space, from Autodesk to Dassault Systèmes, to a handful of smaller companies like Arena Solutions, have stepped up to the plate with serious strategies around the cloud to deliver CAD, PLM, and CAE offerings. While many of the services are still clearly



evolving and some

still semi-experimental, the new generation of 3d modelers see real potential in leveraging the cost benefits, scalable computing horsepower, and ease of collaboration capabilities of the cloud to push product development to the next level.

Outside of the engineering world, the cloud has already gained significant traction. Companies have moved many of their core enterprise systems around finance, sales, marketing, and even HR to the cloud via software-as-a-service platforms, and many of those same engineer skeptics are already working with cloud-based tools without necessarily knowing it.

"Most engineers today don't spend eight hours a day doing pure engineering work, they are in CRM (Customer Relationship Management) systems, they





are in supplier systems, they are doing collaboration, and believe it or not, those systems are all in the cloud," said Brenda Discher, Autodesk's vice president, manufacturing strategy and marketing. She explained: "It's not about moving manufacturing or design to the cloud, it's about moving the right processes to the cloud. We are now just learning about the different industries and different development phases that really fit nicely with the needs of

So while heavy-duty 3D CAD modeling may not make sense in the cloud just yet, experts argue that a number of triedand-true engineering tools and practices do. Leveraging the infinite and highly scalable compute power of the cloud lends itself to simulation, and Autodesk, as well as others, are releasing services around plastics and CFD simulation that enable companies to tap the cloud to run huge simulations that they otherwise couldn't run or could run only with an arsenal of dedicated, expensive compute horsepower.

problems, simulation in the cloud also means engineers can run more studies simultaneously -- a change in design workflow that can lead to better exploration of different design variations and optimization of products.

customers and capabilities of the cloud". **Cloud-based collaboration** Beyond the ability to handle larger and more complex Courtesy: Designnews.com

Feeling' Virtual Objects in Virtual Space

Is this a next-level CAD HMI (human-machine interface)? Miraisens Inc., a Tokyo-based company, recently unveiled what they are calling "3D-Haptics Technology." This new technology allows users to "feel" virtual 3D objects, and move them around in virtual space. The technology is a first and has a lot of promising applications in the gaming world, the medical industry, and 3D printing.

Miraisens is a spin-off company from the National Institute of Advanced Industrial Science and Technology in Tsukuba, Tokyo. Their new technology opens up avenues for innovation in a wealth of different fields. It is interesting as it expands technology's ability to engage our human senses. While we haven't yet been able to touch something within the digital world, 3D-Haptics Technology now makes this possible, virtually.

The current technology works using a virtual reality headset, a bracelet with hardware attached and a fingertip molding that is wired to the hardware on the wrist. The technology



A device that allows users to move virtual 3D objects around in virtual space and "feel" them via a vibration

can also be wired into a coin-shaped mold, a stick, or a pen. The handheld molding emits vibrations on the fingertips that allow users to "feel" 3D objects in virtual space, which they see on their virtual headsets.

These vibrations trick the mind into recreating sensory feelings of touching, pushing, pulling, and experiencing resistance from 3D virtual objects. For instance, the device can allow a user to feel the resistance of pushing a 3D button in virtual reality. It can also allow users

to push, pull, and move 3D virtual objects around, emitting vibrations that recreate a sense of object resistance, even though it's only occurring in virtual space.

The technology literally makes virtual reality "feel" more real. The application within the gaming world are self-evident. The company is also considering using the technology to allow users to create 3D prints via touch. This would eliminate the need for a professional design, and allow novices to create 3D prints at the touch of a virtual button.

More interestingly, there are talks of implementing the technology within the medical industry as a new tool for performing remote surgeries. Some think that the technology could be used to help visually impaired people navigate more easily through haptic sensory information. This is all promising, and it looks like we'll be seeing companies implement better haptic controls in the future.

Courtesy: Designnews.com Image Courtesy: Miraisens Inc.

You will wear more technology on your body in 2015

For people looking for smart, chip-enabled fashion, 2015 promises to be the year to watch out for. Android wear, Apple wear, GOQii Life, Sony arm bands, Garmin Vivofit and more are set to be our permanent round-theclock assistants. Says Kamlesh Bhatia, research director Gartner: "Adoption of wearables was nascent in 2014 and will pick up in 2015 for applications spanning safety and security." Bhatia sees people using devices connected to healthcare apps on their smartphones to monitor themselves continuously.

According to Silicon Valley entrepreneur and investor Vinod Khosla, in future 80% of what doctors do will be replaced by machines. The likes of Samsung

Galaxy S5 with a built-in heart monitor and Sony Xperia Z via its life-logging app come in handy for people keen on real-time health updates. In Bengaluru, an MIT spun out start-up, JanaCare, is working on sensors that can be fitted on the mobile to replace the

"In the US, insurance companies are driving use of wearables offering sops like reduced premiums for those continuously monitoring their health via wearables." Bhatia said.

More people are buying wearables. On Flipkart's online marketplace. Martian watches. Moto360 smartwatch and Garmin Vivofit fitness band are among popular werables. On Amazon.in,

GOQii Life is among popular products in the entire sports, fitness and outdoors department.

Even as wearables become the must-have products, some challenges are going to amplify, especially on privacy and security. Questions have been raised on how Google Glass could be used to record meetings or photograph sensitive data. In October, the Motion Picture Association of America banned use of Google Glass and other wearable devices in theatres. In the US, some restaurants banned Google Glass on privacy concerns.

These trends point to a growthoriented, yet challenging 2015 for



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