DIGIFLASH proudly presents

DIGI TIMES

Department of Computer Science and Engineering

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Battery-free Communication

3 Doodler
Nomore papers to draw, only air..

Windows Blue
Now win8 evolves to win8.1

Eye Movement
New way of Security

Google Driverless Car
Advancements through Arificial Intelligence

Solar Laptops
Use of Solar panels on modern Laptops

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SOLAR LAPTOPS

In the Western world, we tend to take for granted some pretty basic amenities, like reliable electricity. For people living in those corners of the globe where electricity can be scarce, WeWi Telecommunications, Inc. has developed the SOL, a rugged laptop that doesn't rely on a power socket to stay charged. We have seen solar powered laptops before, but never one that promised to be this energy efficient. WeWi claims the SOL never actually needs to be plugged into an electrical outlet to charge, but it still has the option in case you need to keep working late into the night.

The solar panel can even detach and connect to an extension cord, so we can use the computer indoors and still keep it charged with direct sunlight Aside from benefiting the owner by supplying a readily available energy source, the SOL's solar panels should also help the environment by reducing air pollution. According to the developers, each SOL computer could prevent approximately a ton of CO2 emissions from being released into the atmosphere. The designers hope the SOL can serve as a reliable computers for students in developing nations and globe rotting adventurers, which is why the entire device has been designed for durability and built from reinforced materials.

REFERENCE
http://techguruviewers.blogspot.in/solar_laptops

EYE MOVEMENT_PASSWORD

When it comes to passwords most of us use computer systems that require alphanumerical strings to gain access to e-mail and websites. In some instances, other forms of identification and authentication are used rather than typing a password such as fingerprints or even retina scanning. We may be using eye movements rather than typing in strings of text to gain access to secure websites and services in the future.

According to researchers, when looking at a picture everyone's eyes move in a different sequence. The researchers claim that even if two people trace the same paths through an image the exact way their eyes move is different.

The computer scientist Oleg Komogortsev, believes that a system can be created that identifies people, by the way, they move their eyes while looking at a computer screen.

Researchers have proven in the past that some iris scanners can be fooled by simply holding up a high-quality print out of the correct person's eye in front of the scanner. Komogortsev hopes that adding an eye movement sensor could prevent scanners from being fooled

fig: scanning eye movement

TECHNICAL TIPS

STEPS TO CLEAN YOUR RAM USING NOTEPAD

STEP 1: Open Notepad
STEP 2: Type FreeMem (= Space (10240000000
STEP 3
Save it as "CLEAN-ER.VBS" in any location .you like
STEP 4: You can edit the code and write 512 instead of 1024 if you own a 512mb RAM or change to anything you .like
STEP 5: Run it

After this final step your RAM will be free

GSTICK

A normal computer mouse is an innovation many of us take for granted, especially those of us who use one all day, every day. This also means we may ignore the limitations of this device which has been with us for more than 40 years. That is until we come up against a task that requires an extra degree of precision difficult to attain using a conventional mouse.

Mimicking a pen in shape and size, gStick is looking to join the ranks of alternative mouse designs that aim to address these problems.

Gordon Alan Stewart of Anchorage, Alaska, conceived of gStick after trying to sign a contract online using a traditional mouse and realizing quite how hard it is to make precise movements with that form factor. After three years of development and testing, he is now ready to bring gStick to the market, and is using Kickstarter to do so.

The gStick is not really designed for normal Web browsing, instead being focused on PC gamers, and for those who want to experiment with digital art or graphic design, or do some serious photo- or video-editing. It is also suitable for kids, who will find the transition between using a pen and the gStick a lot easier than jumping straight to using a conventional mouse according to the creators.

The mouse is designed to be more comfortable and ergonomic and allow for more intuitive and precise control. It's about the size of a large Sharpie pen, making it compact enough to fit in your pocket.

The wireless gStick mouse works on PC, Mac and Linux and has a sensitivity of 1200 DPI. The gStick features a ceramic ball at its tip, with a removable end to allow for regular cleaning. It also features a scroll wheel that can be manipulated with a finger or thumb, with a button on either side of the wheel.

HEALTH MONITOR

Feeling good? See if the Tinke agrees with your assessment. Designed to plug into an iPhone, the tiny device can give you a snapshot of your respiratory rate, blood oxygen levels and heart rate.

Here's how: Pop the device into your iPhone (or an iPad or iPod Touch), choose a health index from the included app and place your thumb over the device's sensor.

If you opt for the Vita index, the device will record your heart rate, respiratory rate and blood oxygen levels and then use these results to gauge your level of fitness.

If you choose the Zen index, it will rate your relaxation based on your heart rate's variability. Just be forewarned that the device can be a bit finicky. If the room is too bright or you're too fidgety, it often won't work, which could make you feel anything but relaxed. Available in blue, pink, and gray or white, the Zensorium device costs about $120.

FIG: device that monitors respiratory rate

An Interview with Aspiring Lady!!

Dr. Vijayalakshmi Stephen

Dr. Vijayalakshmi -CEO of vijayalakshmi Hitech solutions Madurai

She is one the top ten business magnets in Madurai. She has been awarded with Best woman of the year and best woman entreprenuer. She is presently involved in the activities of women development and research. We invited her to Yuva Sakthi forum to grace the occasion.

1.Where do you still need to grow as a leader?

As I feel that men will gain their updates on technical eon by casual talking, so as a women challenging part is to keep me technically up to date. Also as a part to help other women we have EWT(an association for women) where today's technology will be discussed.

2.How would you able to manage
the current scenario of IT company?

When I forced to a situation to either cut down the salary or the employee count, then I came up with an alternative solution to which my employees readily accepted. Until normal scenario returns we can work for extra time by compensating the leisure time.

3.How do you think the most significant growth will occur in the company?

I go up with Dr.A.P.J.Abdulkalam's saying, it is youngsters by whom the significant growth will occur.

5.How do you start your ordinary day?

With eternal prayer.

6.According to you which one would you say is the important ability that a leader should have?

Although there are many skills essential for a leader ,I personally feel that leader should be well wisher so as to motivate the team in right way.

7.How would you face the critic as a women?

I always say "Ignore the words which does not belongs to you" whenever I face critic. Live example in my life is "all the persons who turned against me in my start of the career are now praising me that I am the perfect example for all women".

8.Where do you want yourself in next 10 years?

One among top ten in telecommunication industry.

9.Your words for us?

As a youngsters "you will win and you will always win.

WINDOWS BLUE

The windows 8.1 code named(blue) preview is now officially available to download, with Microsoft expected to roll out the finished version of the product in the autumn.

Unique features of windows 8:

Fig: Windows Blue

Live operating system:
  This feature enable users to boot windows8.1 directly from USB.
Booting at rocket speed:
  Preview of this software took 6 seconds for loading.
RAM consumption:
  Windows 8.1 uses less than 300 GB for smooth functionality.
Cloud support:
  Cloud support on windows 8.1 enable users to save files to go.
Half-screen app snapping:
  Another fortunate for windows users is 50/50 snapping option.
New live tile options:
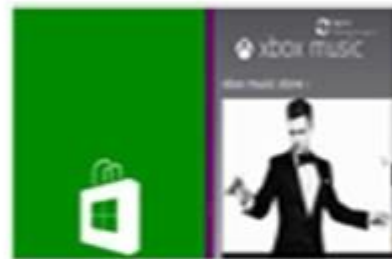 Apart from windows 8 two basic live tile options 1.medium sized

2.larger rectangular size. Windows 8.1 introduces the customization of two new tile sizes.

One is an itty-bitty square a quarter of the size of windows medium tile.

Second is massive tile as big as a pair of windows 8's larger rectangular tiles.

Accidental tile shifting:

One of the biggest frustrations of the windows 8 start screen is how easy is to accidentially move a tile to a new location. Windows blue eliminates that frustration with a new customize button.

New built in apps:

In blue we will find some oddities, bits and pieces like a new calculator, alarm clock and sound recorder – note how these would go great on a tablet or how about that-a smartphones!

TIPS FOR YOU

MAKE YOUR PEN_DRIVE AS RAM

STEP1: Enter into properties of the pen drive.
STEP2: Choose the tab ReadyBoost.
STEP3: Select use this device and click ok.

Now your pen drive will be ready to act as a RAM.

GOOGLE DRIVERLESS CAR

Data source is still a secret recipe, powered by artificial intelligence that utilizes the input from the video cameras inside the car, a sensor on the vehicle's top, and some radar, position sensors attached to different positions of the car. Sounds like a lot of effort to mimic the human intelligence in a car, but so far the system has successfully driven 1609km without human commands!

Mobile eye is the advanced driver assistance technology. The newer version of Mobile eye's system aims to help steer the car in stop-start situations, though drivers are still required to keep their hands on the wheel. Coming up next is a more advanced system that will allow for hands-free driving. This advanced driver assistance technology makes it on to road long before 2025. Google's Robotic test cars have about $150,000 in equipment including a $70,000 LIDAR
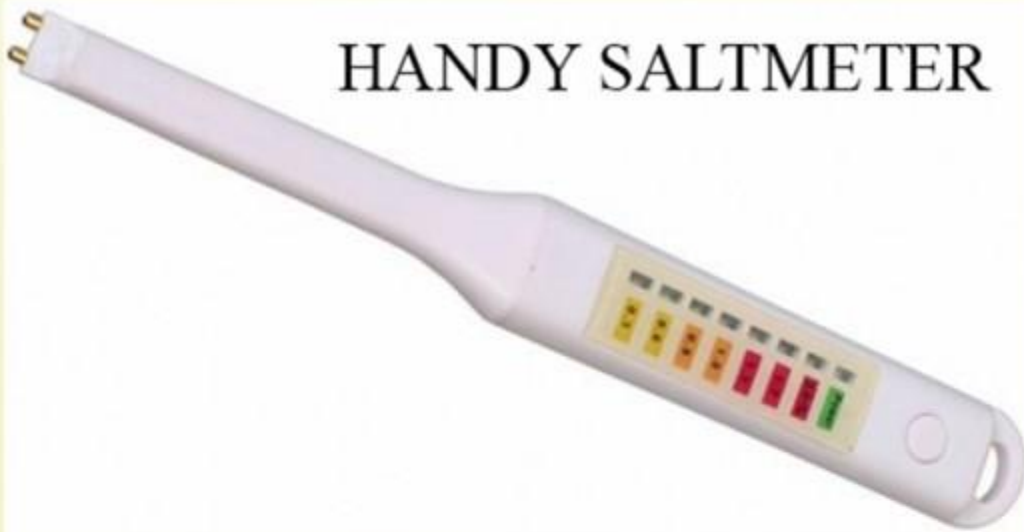

FIG:Google driverless car

(laser radar) system. The range finder mounted on the top is a velodyne 64-beam laser. This laser allows the vehicle to generate a detailed 3D map of it s Environment. The car then takes these generated maps and combines them with high -resolution maps of the world, producing different types of data models that allow it to drive itself.

REFERENCE:

http://in.news,yahoo.com/ google -driverless car

HANDY SALTMETER

A Japanese company called Thanko has invented a device called the Handy Salt Meter. Just as a thermometer measures temperature, the device can measure the amount of sodium in certain dishes

FIG 1: measures salt in food,liquid items

According to the example provided by Thanko, a 100-gram bowl of soup with a reading of 1% would mean that there is one gram of sodium in the soup.

FIG 2: meter has copper sensors

Although many people are trying to consume too much sodium, it can often be difficult to gauge just how much salt (aka sodium chloride) is in that restaurant or pre-packaged meal that you are eating there is now portable gadget that will tell you is "HANDY SALT METER".

Powered by four 1.5 volt LR$$ batteries. the device has a copper sensor at one end that the user lowers in to a hot, liquid item(such as soup, sauce or noodle broth) while depressing the power button. Almost instantly an LED display will light up along the side, indicating the percentage of salt content with in the food.

Concentrations running from 0.3 to 2.0 percent can be displayed. If it is greater than 2 percent then presumably it is meant not to eat.But, the user will also have to know the weight of the food itself. As an example, a 1 percent reading on a 100 gram bowl of broth means that if you eat the whole serving, you will ingest one gram of salt.

serving, you will ingest one gram of salt.

The food weighing and math-doing might be more work than some dieters would wish to do. Additionally the meter can't be used on solid or cold foods its operational range is 60 to 80 C. It is relatively inexpensive though at $19.80 a unit.

REFERENCES:

[1]-www.gizmag.com/thanko-handy-salt-meter
[2]-http://technabob.com/blog/2013/08/08/salt-meter/

HCL Technologies

CEO: Vineet Nayar
Founded: November 12, 1991
Headquarters: Noida, Uttar Pradesh
Founders: Arjun Malhotra, Shiv Nadar

GET READY FOR YOUR JOB

1. What is the current scenario of IT companies?

Slight improvement when compared to previous year. So, be prepared all the time. To be brief, companies are always open for knowledgeable persons irrespective of the situation.

2. Expectations from fresher?

Expectations vary based on the type of the company (product based and service based).In all MNC companies they expect student with moderate technical skills and higher communication skills. Basically, they expect us to think logically for solving problems.

3. Scope of fresher in IT companies?

If fresher is able to express them in a different way, giving new ideas to improvise things then , that person can boom in that particular team with promotions, awards, subject matter experts.

4. What should we do to fulfil the expectations?

Smart work, good knowledge adaptable to any situation. Try to manage the situation when you are left all alone.

5. Life in IT companies?

Luxurious but sometimes stressful too. Very competitive environment and selfish world in which we have to survive so, knowledge is most important.- Knowledgeable persons are respected the most and can reach great heights in short span of time.

6. Things that is essential to survive in corporate world?

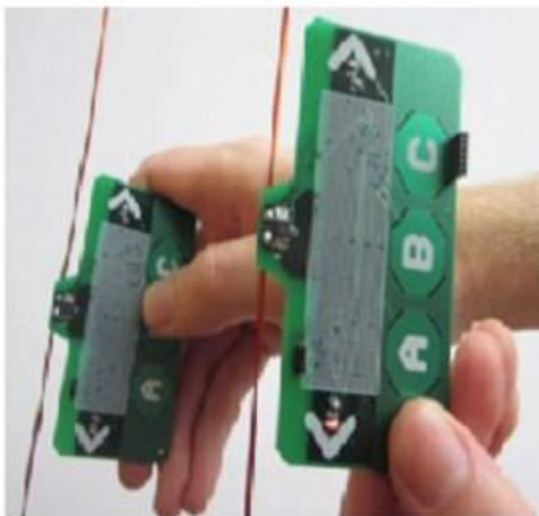Keep yourself technically updated. Browse the net daily for information. Try to keep this as a habit.

7. Words for juniors.

Try to acquire knowledge in some specified field and to be an expert in it. Then, you can rule the world with your ideas. Learn more and more never ever stop it.

Words by 2012 passed out seniors..........

AMBIENT BACKSCATTER

Some engineers at the University of Washington have managed to create several such devices, allowing users to interact or communicate with each other battery free by re-purposing existing radio signals. It is called ambient backscatter, a technique whereby a device appropriates wireless signals already bouncing around in the atmosphere and uses them both as a power source and a way to communicate with other devices. Ambient backscattering has similarities to RFID, but differs in that it doesn't require a high-power signal source, has a relatively small footprint and can communicate device-to-device unlike RFID,where tags have no ability to detect each others' existence.

For example: Say you have a TV tower out there generating radio waves and a couple of battery-free devices nearby call them A and B. If A wants to send information to B, it reflects or backscatters the TV tower's ambient signals,indicating digital "0" or "1" by switching its antenna to either reflect or non-reflect the signal. The reflected signals form an alternative path from the TV tower to B as well as other potential receivers in the area.

in the area. TVs and cell phones are designed to work around the existence of alternate signal paths, but B sees that signal change and can decode it as a message sent from A.We can re-purpose wireless signals that are already around us into both a source of power and a communication medium."It's hopefully going to have applications in a number of areas including wearable computing, smart homes and self-sustaining sensor networks".The devices currently function as glorified digital telegraphs, reflecting signals to create a Morse code of communication between battery free devices.

The card-sized circuit board prototypes, pictured there with funky-looking antennae, were tested just a few feet apart, each harboring an LED light designed to flash when receiving a signal from another device. To get a sense for how the devices would perform in different scenarios, they were tested in various locations, ranging from half a

mile to 6.5 miles from a TV tower. While they worked at all distances, it sounds like they had to be pretty close just 2.5 feet apart outdoors and 1.5 feet apart indoors to transmit at a primitive rate of 1 kilobit per second (or around 1,000 bits per second). That's enough to send small amounts of data, say a text message.

3DOODLER

What is it?

Have you ever just wished you could lift your pen off the paper and see your drawing become a real three dimensional object? Well now you can!

3Doodler is the world's first and only 3D Printing Pen. Using ABS plastic (the material used by many 3D printers), 3Doodler draws in the air or on surfaces. It's compact and easy to use, and requires no software or computers. You just plug it into a power socket and can start drawing anything within minutes.

How does it work?

If you can scribble, trace or wave a finger in the air you can use a 3Doodler. A 3D model will be created using this.

3Doodler in action

As 3Doodler draws, it extrudes heated plastic, which quickly cools and solidifies into a strong stable structure. This allows you to build an infinite variety of shapes and items with ease! Most people will instantly be able to trace objects on paper, and after only a few hours of practice you will be able to make far more intricate objects. What can I make with 3Doodler?

There are many ways 3Doodler can be used. 3Doodles can be created as flat forms and peeled off a piece of paper, as freestyle 3D objects, or in separate parts, ready to be joined together using the 3Doodler. The creative opportunities are endless, including:
• Basic 3D shapes and 3D models.
• Jewellery, pendants and hanging ornaments

models.
- Basic 3D shapes and 3D models.
- Jewellery, pendants and hanging ornaments,decorative art and fridge magnets.
- Personalization of everyday objects (iPhone cases, laptops, pens, etc.).
- A mini Eiffel Tower or a soccer pitch for your Lego men.
- And much more 3Doodler works on almost any surface, including plastic, allowing users to personalize items such as iPhone cases, or anything else they feel like 3Doodling on. 3Doodler can even be used for minor repair work.

3Doodler "stencils":

We're particularly excited about 3Doodler "stencils". sophisticated print-out stencil kits to help you create awesome objects (like our Effil tower).

3Doodler components:

The pen: The 3Doodler pen is 180mm by 24mm. The pen

180mm by 24mm. The pen weighs less than 200 grams or 7 ounces (the weight of a typical apple). 3Doodler will work just on 110v or 240v.

The Ink : The 3Doodler uses 3mm ABS or PLA plastic as its "ink" just like a 3D printer.

There are many risks and challenges in using this 3Doodler.
It should have a good quality control.

REFERENCE:
http://www.kickstarter.com

JOBS FOR YOU

Computer science department students can apply for government jobs like Group A

In the Group A posts like

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REFERENCE
http://governmentjobsalerts.com

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