

# Newton's Apple

**NOVEMBER 2017**

- Password with heart identification

- Claytronics

- Small Satellites

- Oracle Interview Experiences

- Pega Systems

- Telangana government for E-waste management and IoT

- Tech News

# Preface

Hello, Reader!

This edition, we provide you a sneak peek into the happenings in and around the college. Be sure to know that there is more to be written and certainly more to be read in the forthcoming time. So brace yourselves to be amazed and enlightened.

Any suggestions to improve the value of this magazine will be gratefully received and will be incorporated in the subsequent editions.

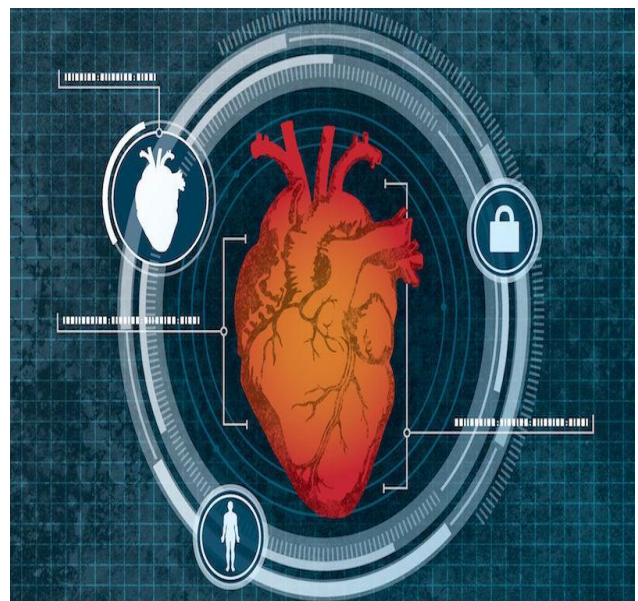
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## Password with Heart Identification

Nowadays remembering the passwords has become a hectic task. Most of us are unable to remember our password for a long time and also password hacking techniques have become common. Biometric security was introduced, but these systems still require you to touch a device (fingerprint) or rely on features that are relatively easy to copy (face or voice). The University of Buffalo believes it has a better biometric security solution, and it uses your heart i.e., password with heart identification.

This method uses a low-level Doppler radar to assess your heart. In this radar basically target is the heart. Here the device will send some electromagnetic signal and these signal bounced by the target i.e., Heart, and analyzing how the returned signal has changed in terms of motion.

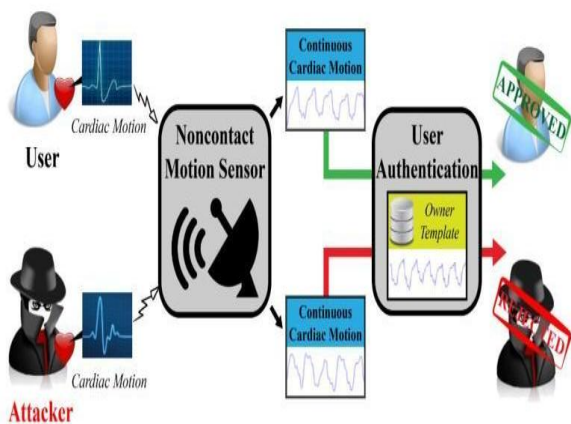
Most of them think that how radar would recognize heart but the fact is everybody's got a unique heartbeat. It's based on the size and shape of your heart and the orientation of your valves, your physiology. It doesn't change unless you have a major cardiac event like a heart attack.



We may get a doubt that when the heartbeat goes up, will it still work? Yes, it would work because the heartbeat may be faster but electrically it looks the same and it takes only the geometry, shape and size of the heart and shape of the waves for the identification. People's hearts do not change shape unless they suffer from serious heart disease.

A unique identity can be created from the data collected, which takes into account the geometry of the heart, its shape and size, and how it moves. Anyone watching the system in action will have no idea what's happening other than your phone/laptop/PC unlocks without any input from the user, and as each heart is unique nobody else can access your devices.

The signals strength of radar is less than the Wi-Fi and therefore it does not cause any heart threat. The system takes about eight seconds to scan the heart for the first time and after that, the monitor can continuously recognize it.



The device monitors the signals continuously and the computer does not operate if another person is in front of it. People do not have to remember to log off when they are away from the computers. It is a passive, non-contact device and no need to remember any type of passwords. Therefore authentication becomes easier and people can log in easily.

The security is further enhanced by the fact that it constantly monitors the user. So, for example, if you are using a device and walk away after some time, the device will lock. If someone quickly takes your position the heart reader will detect the different heart and lock. At most, they'll get a few seconds of access while it reassesses the user.

#### ADVANTAGES:

- The way the heart beats is unique for every individual.
- It is difficult to capture the heartbeat by the intruder.
- Easy to catch the intruder by their heartbeat as it races fast due to fear.

## DISADVANTAGES:

- Highend equipments like ECG are required to capture the heart beat rate.



- It takes 10-15 sec to recognize heartbeat.

As it is under research further features can be added to it.

By

**S.NIRMALA [3/4 ECE A]**

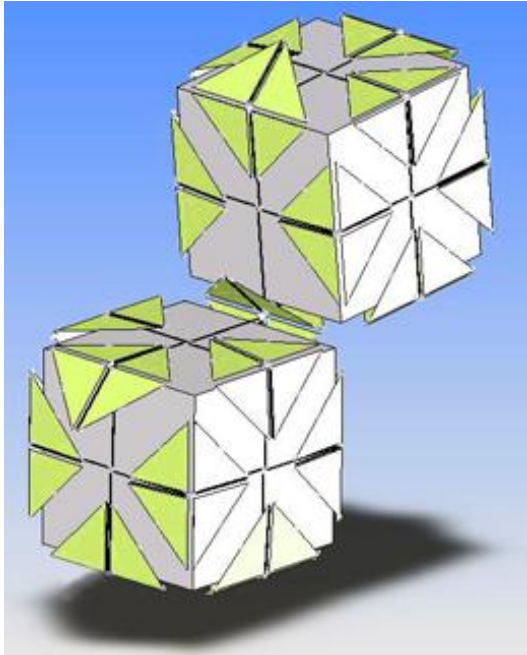
**C.SRINIDHI [3/4 ECE-B]**

## Claytronics

Claytronics is a future concept of combining nanoscale robotics and computer science to create individual nanometer-scale computers called claytronic atoms also called as catoms, which can interact with each other to form tangible 3D objects that a user can interact with. Programmable matter is its popular name. Using this technology matter can be transformed into any shape with desired movement, sound or any physical quality without a change in its chemical composition.

### CLAYTRONICS HARDWARE:

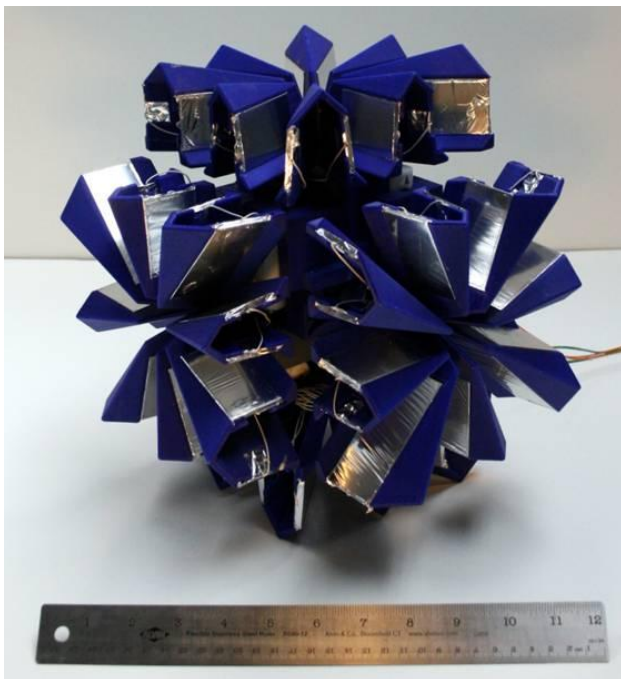
Catoms are the building blocks of Claytronics. They need to be able to move in three dimensions relative to each other and be able to adhere to each other to form a three-dimensional shape and they need to be able to communicate with each other in an ensemble and be able to compute state information, possibly with assistance from each other.



Electrostatic Latches, Stochastic Catoms, Giant Helium Catoms, and Cubes etc.

**CLAYTRONICS SOFTWARE:**

Distributed computing is required in Claytronics as there will be no wire and no unique address of the catoms in a Claytronics matrix. This means it has to be operated in a state of constant flux. The goal of a claytronics matrix is to dynamically form three-dimensional shapes. Two programming languages are developed- MELD & LDP.



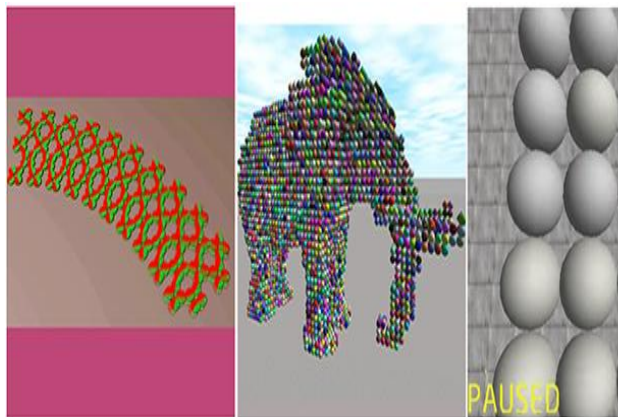
Giant helium atoms  
Cubes

There are many prototypes of catoms Millimeter Scale Catoms, Planar Catoms,

Meld is a declarative language; a logic programming language originally designed for programming overlay networks. It gives the programmers an ensemble-centric perspective, where programs are written for whole rather than individual entities. It is then compiled into discrete programs for the nodes that construct the whole. So the programmer need not have any apprehensions about the intricacies of programming a

distributed system and can lay his emphasis on the logic.

Locally distributed predicates (LDP) is a reactive programming language which has been used to trigger debugging protocols. LDP approaches the distributed programming problem using pattern-matching techniques. LDP allows for the expression of distributed event sequences as well as the expression of particular shapes. These facilities, combined with an array of mathematical and logical operators, allow programmers to express a wide variety of distributed conditions.



## ALGORITHMS:

Shape sculpting and localization algorithms are the two important algorithms of

claytronics. In order to achieve height and volume from the array of a million catoms lying next to each other in a plane, the ensemble must overcome both local inertias as well as gravity. So it becomes necessary for the ensemble to multiply its catom forces. Each catom must restrict its position with respect to the neighboring atoms. Collective Actuation needs to be achieved.

Localization algorithms enable catoms to localize their positions in an ensemble. A localization algorithm should provide accurate relational knowledge of catoms to the whole matrix based on noisy observation in a fully distributed manner.

A lot of advancement of hardware and software algorithms is required for claytronics to become a feasible reality. If the challenges of claytronics can be overcome and a great innovation happens, then furniture could change shape, blank walls could grow doors or windows. Catoms could form into people that we would find difficult to discern



from the real person. A new mode of communication with a realistic sense over a long distance called pario which provides an aural, visual and physical sensation could also be one of the applications of claytronics.

**P.Mahitha**

**BE -- 3/4 (ECE-B)**

## Small Satellites

Earth is constantly changing with human activities hence; it needs to be taken care of. We can't fix what we can't see and to see day-to-day activities of Earth, we need pictures from space every day. But that's not easy! Conventional satellites are big, slow and costly. It takes one rocket to launch one satellite. Also, it requires a large amount of money and time. To understand Earth's activities, this method is not sustainable. So, what's the solution? Small satellites, indeed!

Small satellites, miniaturized satellites, or smallsats are satellites of low mass and size, usually

under 500 kg (1,100 lb). While all such satellites can be referred to as "small", different classifications are used to categorize them based on mass. They can do everything a conventional satellite does and that too at a fraction of the cost.

### Why only small satellites?

Satellites can be built small to reduce the large economic cost of launch vehicles and the costs associated with construction. Miniature satellites, especially in large numbers, may be more useful than fewer, larger ones for some purposes - for example, gathering of scientific data and radio relay.

As satellite gets smaller and cheaper over the years, the barrier to entry into the space industry has also lowered. Earth observation has become accessible to corporations and start-ups alike. A study says that Earth's observation is the primary driver behind the growth. This is because Earth observation market suffers from data poverty in many industry verticals like agriculture,

disaster management, forestry, wildlife etc.

Another major reason for developing small satellites is the opportunity to enable missions that a larger satellite could not accomplish, such as:

- Constellations for low data rate communications
- Using formations to gather data from multiple points
- In-orbit inspection of larger satellites
- University-related research

Mass (kg)	Group name <sup>[1]</sup>
>1000	Large satellite
500 to 1000	Medium satellite
100 to 500	Mini satellite
10 to 100	Micro satellite

1 to 10	Nano satellite
0.1 to 1	Pico satellite
<0.1	Femto satellite

### History:

- Started in Spain in 1990.
- In the 1–50 kg range alone, there were fewer than 15 satellites launched annually in 2000 to 2005, 34 in 2006, then fewer than 30 launches annually during 2007 to 2011. This rose to 34 launched in 2012, and 92 launched in 2013. In 2014 alone, 158 satellites were launched and it is estimated that there will be 500 satellites by 2020.
- European analyst Euro consult projects more than 500 smallsats being launched in the years 2015–2019 with a market value estimated at US\$7.4 billion

## **India in the scenario of small satellites:**

For an Indian student, even the sky is not the limit. Eighteen-year-old Rifath Shaarook designed what he describes as the world's lightest satellite, from scratch. The device weighs a mere 64 grams (0.14 lbs), making it even lighter than a smartphone. "We did a lot of research on different cube satellites all over the world and found ours was the lightest," Shaarook said about his 3D-printed, carbon fiber small-scale satellite.

Named KalamSat, the device is named after India's "Missile Man," former president APJ Abdul Kalam. Kalam was a space-research pioneer in the country and he led India's Integrated Guided Missile Development Programme.

The 12th grader's design scored him a win in the "Cubes in Space" competition for school-age students, organized by the US National Aeronautics and Space Administration (NASA) and the education organization I Doodle

Learning. His prize? The device will now go on a four-hour mission aboard a sub-orbital flight during which it will operate for around 12 minutes in a microgravity environment of space.

KalamSat is one of 80 experiments to be selected from among 86,000 designs from 57 countries. It will be launched on a research rocket from Nasa's six-square-mile Wallops Island Facility in Virginia on June 22, Amber Agee-DeHart, the founder of Cubes in Space program told Quartz. (The rocket will enter space for a few minutes, not orbit the Earth. The purpose is to test whether or not the 3D-printed technology will withstand launch conditions.)

Shaarook, who hails from the town of Pallapati in the south Indian state of Tamil Nadu, is the lead scientist at Chennai-based space education and innovation organization Space Kidz India.

[We can also try building these satellites.](#)

India's proud moment! Watch an 18 year old invent world's smallest satellite!

<https://youtu.be/QSqK5CwCkv0>

<https://youtu.be/dGzeMIbgshs>

Now, let's take a look at how a small satellite could predict the next hurricane.

<https://youtu.be/nG9lYpWy6KM>

For further information on small satellites visit:

<http://www.jossonline.com/>

By,

**Srikar (3/4-ECE-A)**

**Ayesha (3/4-ECE-A)**

## Oracle Interview Experience

By, **P.Naga Sai Kusuma**

### ROUND 1

In this round, we had a written test for 2 hours. There were 4 sections. Each section had a separate time limit and many sub-

divisions. The questions were based on quantitative analysis, aptitude, data structures, DBMS, OOPS concepts and big-O notations.

### ROUND 2

We were tested on our coding skills this time. The task wasn't just writing the code but making it as efficient as possible. There were 2 programs given and we had to compile them within one hour. Usually, one of the programs would be based on Data Structures and the other on Strings, but we were lucky to get both the programs on Strings.

### ROUND 3

Here I had 2 technical rounds and 2 HR rounds.

#### Round 1:

I was first asked to explain my projects. I was also asked code for basic C programs. Few of them were:

1. Reverse a string without using strrev
2. How to concatenate two strings
3. Reverse a number.

What they observe here is your problem-solving ability and not the syntaxes.

### **Round 2:**

In this round, I was asked questions on my fundamentals in DBMS, Java, OOPS (as I had mentioned them in my resume). I was also asked to write one SQL command to find the highest value in a table. Few Java questions that were asked were: What is static? Why do we use static? There were also questions regarding DBMS.

I was asked to classify commands into DDL, DML etc. I was also asked about normal forms. The last question I was asked in this round is how do you connect to SQL software?

### **Round 3 & 4 (HR):**

Here I was first asked to talk about myself and was asked a few puzzles.

1. You are given only two candles and a matchbox. How do you measure 45 minutes if one candle burns for exactly 1 hour?

2. A square cake is cut in the corner randomly. How do you cut it into two equal halves?

3. You are given a 5L can and 3L can. How do you measure 4L?

I was questioned about the extra-curricular activities that I had mentioned in my resume.

In this round, you would also be tested to see how interested you are to join the company. So, make sure you are confident about whatever you are mentioning about yourself

Overall, I had a great experience through all these rounds.

## **Oracle Interview Experience**

**By, Vyshnavi Veluri**

After a long wait, I was called in for my first round of interview. It was a technical interview. I was initially asked to talk about myself and was given sufficient time to do so. After that, the technical questionnaire began. I was questioned on the basics of Java-OOPS, Fundamentals of

Oracle and C language. Then a major time was spent on detailing a scenario which had to be solved by me in any comfortable programming language. They were dominantly logical and analytical scenarios which would require a good thought process to get the efficient code. But, if you could not write down an efficient code but could think of all possible approaches to solving it, it would be considered.

After getting selected at the end of the first round, I was quizzed on aptitude, puzzles and some more coding logic. It took a good amount of patience to analyze and solve those questions. Later, I was questioned on the basic knowledge of my engineering core subjects and few engineering mathematical questions. The difficulty level of this round was a little higher than the prior and the atmosphere a bit more apprehensive.

Upon being selected for the third round of interview, I was interviewed by the director. It was an HR round. It mainly revolved

around my interests and hobbies that I was passionate about. Having a strong passion about topics outside your curriculum would give you an added advantage.

Overall, a calm and confident composure along with being good at the technical skills that you mentioned in your resume and having a passion towards what you pursue would do.

## Pega Systems Experience

**By, Sonika**

First of all, thanks to Newton's Apple for giving me a chance to recollect the memories of my interview and discuss the experiences with everyone. I'm a student whose technical knowledge could be considered average. After Deloitte, the next good company coming to college for recruitments was Pega Systems (8.2lpa), three days later. I'm certified in CSA with a score of 67% where the cut off was 65% but

was super clueless about getting through Pega systems. The desolation of losing out on Deloitte involuntarily propelled me to prepare for Pega Systems. Three days before the interview we were informed that we were going to have core java as a separate section in written exam. This made the written test itself a herculean task. I started listening to classes about core java on YouTube at 6:00 am on the very next day of Deloitte interview, till 12:00 pm. Given below are the various rounds that took place on the day of the interview.

### **Written exam pattern:**

- 1) Aptitude- 15 questions, 30marks.
- 2) Core java- 15 questions, 15marks.

As I'm a CAT aspirant, aptitude section appeared a tad bit easy to me. I confidently got 13/15 correct.

Preparation of 3 days for core java wasn't enough, but somehow I attempted all the questions and finally got through the test.

### **Round 1: Technical**

Since Pega Systems is associated with Pega software and not C language or java, the recruiters are not much aware of those languages.

The very first question in every round is "Tell me about you". We need to be 100% prepared for the question. The questions were 50% on Pega Other 50% questions were on Java, C and puzzles. Questions on Java and C were easy.

I attended CAT classes in our college where Sharath sir made us solve a lot of puzzles. So in a single attempt, I answered all the questions on Java and puzzles. This impressed the interviewer and I got promoted to next round.

### **Round 2: Technical**

The process went on same like the first round. I could answer only half of Pega related questions and all of Java and puzzle related questions.

They filled my feedback form in which had:

- 1: Great communication skills.
- 2: Pega 2/5

3: Logics 23/25

4: Puzzles 23/25.

When the interviewer asked questions mostly on Pega, my chances to get through the interview began to decrease. So I said, "I'm good at Java, C and C++ also. We can shift to those topics apart from Pega." The very next moment I was asked questions on basic coding and puzzles in which I'm excellent. This way you can turn the interview to your side. This ended the round 2.

### **Round 3: Technical**

The final two rounds were the best rounds. Usually, there are two types of panels, easy and tough. For my poor-luck, I was to go to the rejection panel.

The interviewer was an elderly person was looking forward to selecting the best student out of us. Whatever you spoke about, he would find a fault in it and try to discourage you telling it was wrong. He asked me questions on Pega, out of which I could hardly attempt half of them. Then he saw my logical score on the feedback form and asked me a

puzzle, I answered about 75% of it. He wasn't satisfied. He directly said, "I'm sorry Sonika, I'm 50-50 on you. You can leave. Do you have any question for me?" I asked him the answer to the previous puzzle. He gave me a small clue. I answered it perfectly. He was satisfied with my answer and the interview instead of ending, started again. He then asked me another puzzle, I answered it too. After a few more questions, I was sent to next round.

### **Round 4: HR round**

The day was Tuesday on which I fast for lord Hanuman. Interviews went on for the entire day and eating nothing made me totally feeble. The HR round was at around 8:00pm. I wanted to go home eat some fruits and sleep rather than attend the interview. I still forced myself into the panel. Let me describe the process briefly as I enjoyed it the most.

I- interviewer,

Me- Sonika

I: Tell me about yourself.

Me: Replayed the same old story.



I: Do you watch movies and what kinds of movies do you like?

Me: I like animated movies because of the cute and goofy looks of the characters. It extends the possibility of showing things and places. For example, Antarctica can also be shown in animated movies beautifully, which cannot be done in other kind of movies.

I: What kind of business does your father do?

Me: Since my childhood, I always had a quality of questioning everything and knowing how mechanisms are done. My dad runs a granite industry and manufacture different sizes of stones required to build a house or road etc. I explained him how machines work in the industry briefly.

I: Why didn't you get into IIT?

Me: I was very ill on the day of exam.

I: Why didn't you try next year, because IIT is an IIT.

Me: I'm not good enough in physics and I just wanted to move on instead of wasting a year. I've

had many other good opportunities apart from IIT.

I: What are these good opportunities?

Me: I've gotten into a good college like Vasavi. I got a chance to attend for Pega systems interview.

I: What if you don't get into Pega?

Me: I've learned and got certified into CSA so I would definitely attend interview next year to get into Pega.

I: You look so weak Sonika.

Me: I generally fast on Tuesday. I didn't have time to have any food so...

I: What's your opinion on challenges in life?

Me: Basically I'm a foodie. I used to set targets to complete learning any course or newspaper or anything, and then I would allow myself to eat foods which I like.

I: Thank you, you may leave.

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The moment that I got selected joyously touched my heart. The selected students got a 16 GB pen drive, a beautiful file, a T-shirt, a bag and lovely Ferrero

Rocher pack. After the distribution was done, the HR said to me, "You can break your fast with these chocolates now." It was a very lovely situation; I thanked him for all the goodies.

At the end, what I've learned is, if you work hard, good luck will always be with you. Everyone may not be successful at the very first interview; some take time but, never lose confidence and stop preparing for interviews. No one knows which interview might be favorable to you.

I would like to share the puzzles which I loved.

1- There are 10 boxes with 10 balls in each box. Each ball has 10gms weight. But one box is faulty and has all the balls of 9gms (one gm less). All the balls look similar. You have a digital weighing machine. With a single attempt, how do you find out the faulty box?

Clue: Use Arithmetic progression

A: take 1ball from first box, 2 from second box and so on 10 from 10th box. Totally you have 55 balls

now. Weigh them. If all balls were fair, the weight should be  $55 \times 10 = 550\text{gm}$ .

If the weight displayed is 546gms only, it means 4gms lack. 4 balls out of all are lacking one gm each. It means the 4th box is the faulty one.

2- There are two stations A and B. Every hour from 6:00 AM to 10:00 PM, buses start from both the stations. The time taken by buses to reach either side is 9hrs.

After 10:00pm, no bus starts from either station. The bus that has already started at 10 continues its journey. If a bus starts at 6:00 AM from A, how many buses of B it has to cross before reaching A?

Station A <-----9hrs----->  
station B

A: 10 buses. The bus takes 9hrs to reach B. At 3:00 PM it reaches B. So 6am B bus, 7am B bus, 8am B bus.....3pm B bus. Thus it crosses 10 buses. But the 3pm bus is not started yet from B. So it doesn't cross this one. Do you think answer is 9 buses now? No, the answer is still 10. The 10pm B bus

reaches A at 7 AM in the morning.  
So it crosses the 6 AM bus. Thus  
the answer is 10.

Thanks for reading!

## Telangana government for E-waste management and IoT

Under the IT, Electronics, and Communication (ITE&C) sectoral policies of 2016 Telangana government has launched last two policies i.e., E-waste management and Internet of Things (IoT) on 10th of this month at HICC. Department of ITE&C, government of Telangana in association with FICCI organized an event under the name of “i-Telangana: Embracing Technology Transforming Telangana”



Mr. BVR Mohan Reddy,  
founder and executive chairman

of CYIENT advised the government to make some changes in the education system in the state to meet the necessary goals of industries as he expected 55 new job roles with 150 new skills due to the growth of new technologies like AI, ARVR, and IoT.

Ms. Nivruiti Rai, country Head, Intel India and vice president, Data centers group, Intel Corporation, gave a presentation on 5G, AI, machine learning, for which Intel is presently working. She mentioned that presently they are working with 10nm technology and they have succeeded to build 7 billion transistors on a single chip.

She also explained about the quantum internet which is unhackable, it is a super secure quantum-based network for which Chinese researchers have taken a step forward and achieved some results. It may take at least a decade for implementation.

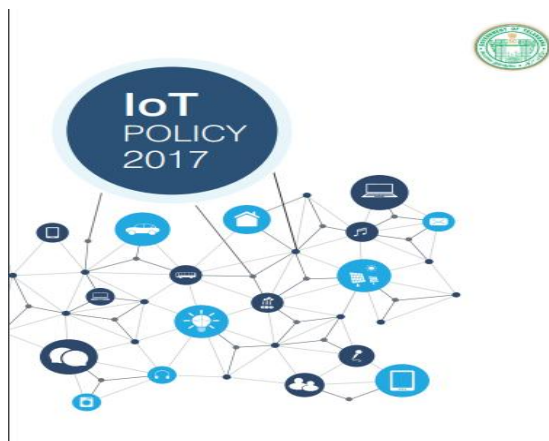
Shri Jayesh Rajan, IAS,  
principal secretary of the  
industries & commerce (I&C) and

IT departments, Government of Telangana, mentioned that under this sectoral policy there are 10 sub-sectoral policies

1. Electronics (ESDM) Policy
2. Gaming & Animation (IMAGE) Policy
3. Rural Technology Centres Policy
4. Innovation Policy
5. Open Data policy
6. Data Analytics Policy
7. Data Centre Policy
8. Cyber Security Policy
9. IoT Policy
10. E-Waste Management Policy

All the policies have been released during this 2 years.

### Key points of IoT policy



To position Telangana as a test bed for IoT solutions vision

- To attract investments worth 10,000 Cr and generate direct employment to 50,000 people in the next 5 years
- Create 5 zones each in Hyderabad, Warangal, and Sircilla districts for deploying PoCs in the IoT Space Objectives

To achieve the objectives set for the state, the Government plans to take a 5-pillared approach IoT policy 2017

1. Develop world class infrastructure to promote development of IoT products.
2. Promote manufacturing and procurement of IoT based solutions.
3. Provide support to Start-ups in raising capital.
4. Create a ready-to-employ talent pool in the State.
5. Enter into partnerships and tie-ups to develop Know-how.

Telangana government has focused on smart city solutions,

health IoT, smart logistics and agri-tech areas of the state within IoT.

To encourage the IoT hardware manufacturing in the state, all the incentives mentioned in the Electronics policy 2016, will be applicable and further incentives in the area of quality certification, patent filling and SGST reimbursement will be made available.

### **Key points of E-Waste Management Policy**

- To create an aware society which plays an active role in managing e-Waste by segregating and channelizing end-of-life products to the right avenues.
- To assist the highly unsafe unorganized sector transition into the organized sector through various initiatives.
- To create a vibrant e-Waste refurbishing and recycling ecosystem in the State.



The State Government shall undertake the following activities:

1. The state shall earmark industrial space or shed for e-waste dismantling and recycling in the existing and upcoming industrial parks, estates and industrial clusters.
2. A mandatory registration process shall be notified for workers involved in dismantling and recycling after consultation with the department of labor, employment training and factories.
3. Under the State Skills Development Mission, skills involved in dismantling and recycling shall be taken up as a priority area to ensure safety & health of the workers. TASK shall collaborate with the Skill Council

for Green Jobs to develop and drive programs for these workers.

4. The Government shall prepare an integrated plan for effective implementation of these provisions.

The Government also mentioned about incentives to boost refurbishing and recycling like capital investment subsidy, subsidy on lease rentals, training subsidy and reimbursement of municipal/ panchayat taxes.

Shri K.T. Rama Rao, cabinet minister for IT E&C, MAUD, Industries & Commerce, Mines & Geology, Public Enterprises and NRI Affairs, Government of Telangana talked about 6.4 billion devices being connected in the world right now. Today's IoT will turn into IoE (Internet of Everything) soon.

He discussed starting T-Works, a hardware prototyping center which includes facilities to prototype IoT tech- electronics section and testing tools in the lab for IoT.

The government of Telangana state shall enter into partnerships with OEMs and ODMs in the state by providing financial and regulatory assistance. Hyderabad generates 25,000 MT of e-Waste annually (2015). This policy will help to recycle, reduce and reuse the E-waste with collection, dismantling and Recycling units

Delegates from different colleges and companies attended the event. Stalls were inaugurated by the ministers which was followed by panel discussions on "Unlocking the IoT potential for industry 4.0" and "E-Waste Management".

**By,**

**B. Pruthvi Raj (3/4 ECE-A)**

## Tech News

Dual batteries, layered logic boards revealed in iPhone X

<http://appleinsider.com/articles/17/11/03/dual-batteries-layered-logic-boards-revealed-in-iphone-x-teardown>

The iPhone X Tesla with a solar panel on the back.

[https://www.gsmarena.com/caviar\\_iphone\\_x\\_tesla\\_solar\\_panel-news-28058.php](https://www.gsmarena.com/caviar_iphone_x_tesla_solar_panel-news-28058.php)

The ISS is getting a long, long overdue printer upgrade

<https://www.engadget.com/2017/11/03/the-iss-is-getting-a-long-long-overdue-printer-upgrade/>

Facebook's Bonfire Group Video Chat App Now Available for Android

<http://gadgets.ndtv.com/apps/news/facebook-bonfire-video-chat-android-app-available-for-download-google-play-1770755>

Ford made a trucker hat that might save drivers' lives

<https://www.engadget.com/2017/11/02/ford-made-a-trucker-hat-that-might-save-drivers-lives/>

YouTube Kids update gives kids their own profiles, expands controls

<https://techcrunch.com/2017/11/02/youtube-kids-update-gives->

[kids-their-own-profiles-expands-controls/](#)

\$370,000 worth of iPhone X devices were stolen from a UPS truck

<https://www.theverge.com/2017/11/3/16601970/iphone-x-devices-stolen-apple-store-san-francisco>

Microsoft patents a way to fit a 3.5mm headphone jack into less than 3.5mm of space

<http://pocketnow.com/2017/10/30/microsoft-patents-3-5mm-headphone-jack>

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Draft Guidelines Leave Door Open for Drone Deliveries by Flipkart, Amazon

<http://gadgets.ndtv.com/transportation/news/drone-ecommerce-deliveries-india-regulations-draft-guidelines-1770382>

Hybrid Electric Jet is Preparing for Takeoff in 2022

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Kepler data reveals existence of 20 promising exoplanets 'hiding in plain sight'

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ARM announces new display technologies to improve VR and HDR

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- **And also, not to forget, the entire **Newton's Apple team.****