K.S.Rangasamy College of Arts and Science

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Oshare

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Department of Computer Science

and

Computer Applications

Ishare

Editorial

We would like to wholeheartedly thank our honorable Chairman, Secretary, Executive Director and Principal for their continuous encouragement and constant support for bringing out the magazine. We profoundly thank our Head of the Department for encouraging and motivating us to lead the magazine a successful one right from the beginning. Ishare serves as a platform for updating and enhancing upcoming technologies in Information and Communication. We are grateful to all the contributors to this magazine so far. The magazine has been sent to almost 60 Institutions in and around Tamilnadu. So far we have received feedbacks and appreciations from various Institutions.

We would be very pleased to receive your feedbacks. Please send your feedbacks to ishare@ksrcas.edu

By,

Editorial Board

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VOICE MORPHING

R. Nirmala, Assistant Professor
Department of Computer Science

Voice morphing (also known as ***voice transformation*** and ***voice conversion***) is the software-generated alteration of a person's natural voice. The purpose may be to add audio effects to the voice, to obscure the identity of the person or to impersonate another individual.

Voice morphing software that alters a voice to sound like a target individual is the most sophisticated technology and the most difficult to create. This is the CUED project at the University of Cambridge.

There are basically three inter-dependent issues that must be solved before building a voice morphing system. Firstly, it is important to develop a mathematical model to represent the speech signal so that the synthetic speech can be regenerated and prosody can be manipulated without artifacts. Secondly, the various acoustic cues which enable humans to identify speakers must be identified and extracted. Thirdly, the type of conversion function and the method of training and applying the conversion function must be decided.

At Los Alamos National Laboratory in New Mexico, researchers developed voice morphing technology that allowed them to create

convincing representations of the voices of a number of United States Generals. In 1999, Los Alamos researchers replicated speech patterns from a 10-minute recording of General Carl W. Steiner and played the general a message: "Gentlemen! We have called you together to inform you that we are going to overthrow the United States government." Other voice clones included Colin Powell saying "I am being treated well by my captors."

There are various consumer-voice morphing applications available. An iPhone app called Voice Morphing offers modes including helium, gangster, robot and alien. Second Life voice morphing effects include techie, masculine, feminine, scary and tiny.

SCADA

B. Sowmya, Assistant Professor
Department of Computer Applications

SCADA (Supervisory Control and Data Acquisition) is a category of software application program for process control, the gathering of data in real time from remote locations in order to control equipment and conditions. SCADA is used in power plants as well as in oil and gas refining, telecommunications, transportation, and water and waste control.

SCADA systems include hardware and software components. The hardware gathers and feeds data into a computer that has SCADA software installed. The computer then processes this data and presents it in a timely manner. SCADA also records and logs all events into a file stored on a hard disk or sends them to a printer. SCADA applications warn when conditions become hazardous by sounding alarms.

SCADA is a system for remote monitoring and control that operates with coded signals over communication channels (using typically one communication channel per remote station). The control system may be combined with a data acquisition system by adding the use of coded signals over communication channels to acquire information about the status of the remote equipment for display or for recording functions. It is a type of industrial control system (ICS). Industrial control systems are computer-based systems that monitor and control industrial processes that exist in the physical world.

Industrial processes include those of manufacturing, production, power generation, fabrication, and refining, and may run in continuous, batch, repetitive, or discrete modes.

Infrastructure processes may be public or private, and include water treatment and distribution, wastewater collection and treatment, oil and gas pipelines, electrical power transmission and distribution,

wind farms, civil defense siren systems, and large communication systems.

Facility processes occur both in public facilities and private ones, including buildings, airports, ships, and space stations. They monitor and control heating, ventilation, and air conditioning systems (HVAC), access, and energy consumption.

A SCADA system usually consists of the following subsystems:

Remote terminal units (RTUs) connect to sensors in the process and convert sensor signals to digital data. They have telemetry hardware capable of sending digital data to the supervisory system, as well as receiving digital commands from the supervisory system. RTUs often have embedded control capabilities such as ladder logic in order to accomplish boolean logic operations.

Programmable Logic Controller (PLCs) connects to sensors in the process and converts sensor signals to digital data. PLCs have more sophisticated embedded control capabilities than RTUs. PLCs do not have telemetry hardware, although this functionality is typically installed alongside them. PLCs are sometimes used in place of RTUs as field devices because they are more economical, versatile, flexible, and configurable.

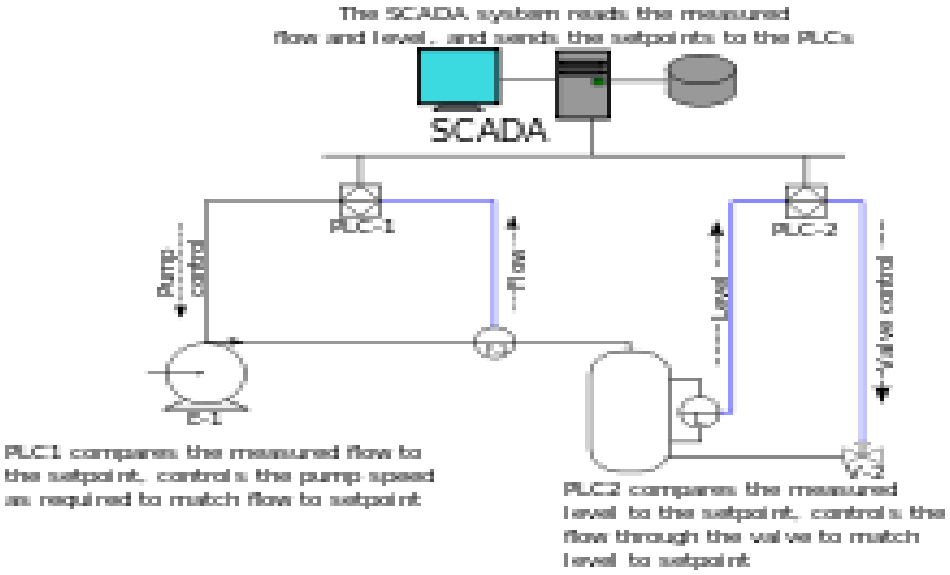
A telemetry system is typically used to connect PLCs and RTUs with control centers, data warehouses, and the enterprise. Examples of wired telemetry media used in SCADA systems include leased telephone lines and WAN circuits. Examples of wireless telemetry media used in SCADA systems include satellite (VSAT), licensed and unlicensed radio, cellular and microwave.

A data acquisition server is a software service which uses industrial protocols to connect software services, via telemetry, with field devices such as RTUs and PLCs. It allows clients to access data from these field devices using standard protocols.

A human–machine interface or HMI is the apparatus or device which presents processed data to a human operator, and through this, the human operator monitors and interacts with the process. The HMI is a client that requests data from a data acquisition server or in most installations the HMI is the graphical user interface for the operator, collects all data from external devices, creates reports, performs alarming, sends notifications, etc.

A Historian is a software service which accumulates time-stamped data, Boolean events, and Boolean alarms in a database which can be queried or used to populate graphic trends in the HMI. The historian is a client that requests data from a data acquisition server.

A supervisory (computer) system, gathering (acquiring) data on the process and sending commands (control) to the SCADA system.



SCADA Architectures:

SCADA systems have evolved through four generations as follows:

First generation: "Monolithic"

Early SCADA system computing was done by large minicomputers. Common network services did not exist at the time SCADA was developed. Thus SCADA systems were independent systems with no connectivity to other systems. The communication protocols used were strictly proprietary at that time. The first-generation SCADA system redundancy was achieved using a back-up mainframe system connected to all the Remote Terminal Unit sites and was used in

the event of failure of the primary mainframe system. Some first generation SCADA systems were developed as "turnkey" operations that ran on minicomputers such as the PDP-11 series made by the Digital Equipment Corporation.

Second generation: "Distributed"

SCADA information and command processing was distributed across multiple stations which were connected through a LAN. Information was shared in near real time. Each station was responsible for a particular task, which reduced the cost as compared to First Generation SCADA. The network protocols used were still not standardized. Since these protocols were proprietary, very few people beyond the developers knew enough to determine how secure a SCADA installation was. Security of the SCADA installation was usually overlooked.

Third generation: "Networked"

Similar to a distributed architecture, any complex SCADA can be reduced to simplest components and connected through communication protocols. In the case of a networked design, the system may be spread across more than one LAN network called a process control network (PCN) and separated geographically. Several distributed architecture SCADAs running in parallel, with a single supervisor and historian,

could be considered a network architecture. This allows for a more cost effective solution in very large scale systems.

Fourth generation: "Internet of Things"

With the commercial availability of cloud computing, SCADA systems have increasingly adopted Internet of Things technology to significantly reduce infrastructure costs and increase ease of maintenance and integration. One such example of this technology is an innovative approach to rainwater harvesting through the implementation of real time controls (RTC).

SCADA in the workplace

SCADA is one of many tools that can be used while working in an environment where operational duties need to be monitored through electronic communication instead of locally. For example, an operator can position a valve to open or close through SCADA without leaving the control station or the computer. The SCADA system also can switch a pump or motor on or off and has the capability of putting motors on a "Hand" operating status, off, or Automatic. "Hand" refers to operating the equipment locally, while Automatic has the equipment operate according to set points the operator provides on a computer that can communicate with the equipment through SCADA.

BEST FREE ONLINE PRESENTATION TOOLS FOR 2016

R.Sudha, Assistant Professor

Department of Computer Application

Some of the best presentation software available is more functional than PowerPoint and have features that Microsoft wishes it had thought of. The choices available in today's market is better than ever, with many presentation tools offering file type export, free image bundles, or cloud access. Some of these also have a price point you will not find with Microsoft; they're free.

The Best Things in Life Really Are Free

Ask many people what their favorite word is and nine times out of ten that word is "free." Throw in high performance, ease of use, and functionality and you will soon be in love with your online presentation software. Here are some great ones to consider that will make your presentations and your business pop.

Visme

One of the best ways to bring your visuals to life is with the complimentary browser-based tool by Visme. It is simple to create a variety of visuals with Visme, including;

- Graphs and charts
- Mobile and web animations.
- Infographics
- Product demos
- Banner ads

When you initially go to the Visme website be sure to watch the tutorial video which easily explains how the whole thing works.

Visme is hands-down one of the easiest presentation tools to be found. As some web developers have noted it's "so easy your grandmother could use it," while it creates presentations that would impress seasoned veterans of visual content.

Pros:

- Incredibly user-friendly. Seriously, your grandmother really could do this.
- Great features.
- Creates rich graphics and animations which every small business will love.
- No coding.
- Free!

Cons

- None.

Google Slides

Google Slides works seamlessly with the other apps in Google Drive, such as Google Docs and Sheets. It resembles PowerPoint quite a bit and performs many of the same functions. It has many tools that can make your presentation look visually stunning and informative.

Slides are an online presentation tool that works with any browser. It is very easy to use and it is also everyone's favorite word, free. Unlike Visme, it does have a few drawbacks, but, all in all, it is definitely worth your while to try it out.

Pros

- Easy to use. If you have used PowerPoint before you will definitely have an easy time using Google Slides.
- Safe. Google Drive knows what it is like to lose your work so they automatically save it for you every few seconds. No more cursing and unsightly temper tantrums from otherwise grown people just because they forgot to hit save.
- Easy to share and collaborate with others.
- Free!

Cons

- Slow. Despite its usability, it can be very sluggish.
- Not as many features as other presentation tools. This is very basic.

Emaze

Emaze is a great online presentation tool that comes with many features. No software needs to be downloaded and it can be used with any browser. All you need to do is sign up for an account at Emaze.com.

Like Google Slides, Emaze is similar to Microsoft PowerPoint. This software can create beautiful graphics and designs that will show off exactly why your business is the right one for the job. It is cloud based which allows you to view and store all of your work online. For the most part, this is a plus, though if you want to work offline you will be out of luck.

Pros

- Great selection of templates to choose from. You will have gorgeous graphics using emaze.
- Easily share your work on social media sites due to its cloud sharing capabilities.
- Free!

Cons

- Buggy. It is in Beta so that is to be expected.
- Can be a tad bit slow.

SECRET HACK CODES FOR ANDROID MOBILE PHONES

R. Nirmala, Assistant Professor
Department of Computer Science

1. Complete Information about your Phone

#*#4636#*#

This code can be used to get some interesting information about your phone and battery. It shows following four menus on screen:

- Phone information
- Battery information (How to maximize or boost Battery life in android phones)
- Battery history
- Usage statistics

2. Factory data reset

#*#7780#*#

This code can be used for a factory data reset. It'll remove following things:

- Google account settings stored in your phone
- System and application data and settings
- Downloaded applications

It'll NOT remove:

- Current system software and bundled application
- SD card files e.g. photos, music files, etc.

Note: Once you give this code, you get a prompt screen asking you to click on "Reset phone" button. So you get a chance to cancel your operation.

3. Format Android Phone

***2767*3855#**

Think before you give this code. This code is used for factory format. It'll remove all files and settings including the internal memory storage. It'll also reinstall the phone firmware.

Note: Once you give this code, there is no way to cancel the operation unless you remove the battery from the phone. So think twice before giving this code.

4. Phone Camera Update

#*#34971539#*#

This code is used to get information about phone camera. It shows following four menus:

- Update camera firmware in image (Don't try this option)
- Update camera firmware in SD card
- Get camera firmware version
- Get firmware update count

WARNING: Never use the first option otherwise your phone camera will stop working and you'll need to take your phone to service center to reinstall camera firmware.

5. End Call/Power

#*#7594#*#

This code can be used to change the "End Call / Power" button action in your phone. Be default, if you long press the button, it shows a screen asking you to select any option from Silent mode, AirPlane mode and Power off.

You can change this action using this code. You can enable direct power off on this button so you don't need to waste your time in selecting the option.

6. File Copy for Creating Backup

#*#273283*255*663282*#*#

This code opens a File copy screen where you can back up your media files e.g. Images, Sound, Video and Voice memo.

7. Service Mode

##197328640#*#*

This code can be used to enter into Service mode. You can run various tests and change settings in the service mode.

8. WLAN, GPS and Bluetooth Secret Hack Codes for Android:

##232339#*#* OR *#*#526#*#* OR *#*#528#*#* – WLAN test (Use "Menu" button to start various tests)

##232338#*#* – Shows Wi-Fi MAC address

##1472365#*#* – GPS test

##1575#*#* – Another GPS test

##232331#*#* – Bluetooth test

##232337#*# – Shows Bluetooth device address

9. Codes to get Firmware version information:

##4986*2650468#*#* – PDA, Phone, H/W, RFCallDate

##1234#*#* – PDA and Phone

##1111#*#* – FTA SW Version

##2222#*#* – FTA HW Version

##44336#*#* – PDA, Phone, CSC, Build Time, Changelist number

10. Codes to launch various Factory Tests:

##0283#*#* – Packet Loopback

##0*#*#* – LCD test

##0673#*#* OR *#*#0289#*#* – Melody test

##0842#*#* – Device test (Vibration test and BackLight test)

##2663#*#* – Touch screen version

##2664#*#* – Touch screen test

##0588#*#* – Proximity sensor test

##3264#*#* – RAM version

CAR GPS TRACKING

Mr.R.Rajesh Kumar, II B.Sc

Car GPS Tracking is fairly common in new vehicles, providing drivers with tracking and navigation.

However, latest technology inventions have made car GPS tracking systems more sophisticated, allowing for a wide range of additional uses.

Smartbox technology is one example of how car GPS tracking systems are being used to lower car insurance.

A comprehensive recording of a driver's habits allows insurance companies to provide "pay-as-you-drive" car insurance.

City officials in New York City are considering how car GPS tracking could be used as "Drive Smart" technology.

Most large cities have a limited capability to change the infrastructure of their roadways.

A car GPS tracking system that integrates with traffic information would give drivers the ability to select routes in real time that were more fuel efficient, less congested, faster or shorter.

A driver's recorded routing selection could then be used to penalize or reward drivers by lowering or increasing their related licensing fees or by calculating mileage based "road-use" fees.

Eventually, such a system would replace gasoline tax since these revenues will decline as more vehicles become less dependent on fossil fuels.

MANAGED BROWSING

T. Vadivel, Assistant Professor
Department of Computer Applications

For the past year and half, the lead researcher on the Eyebrowse project has been Amy Zhang, an MIT graduate student in Electrical Engineering and Computer Science and first author on the new paper. She's joined by Karger, who is her thesis advisor, and by Joshua Blum, who received his master's in Electrical Engineering and Computer Science from MIT.

Eyebrowse currently consists of two components: a website and an extension to Google's Chrome web browser. Installing the extension involves two mouse clicks and takes seconds. Thereafter, anytime the user visits a web page, clicking the Eyebrowse icon on the browser task bar will pull down a window offering an array of features.

One is the opportunity to add the site's domain name to the user's "whitelist." As long as the Eyebrowse extension is turned on, the system will record the user's visits to pages on whitelisted sites. But the pull-down window also features a switch for turning Eyebrowse off, for private browsing. (The Eyebrowse icon, an open eye, "closes" when the system is off.) Similarly, it offers a button for reporting visits to sites not on the whitelist.

The pull-down window also lists which members of the Eyebrowse community have visited the page and when, any annotations that they have made to the page, a field that allows the user to make his or her own annotations, and a chat window for Eyebrowse users.

VIEWING DATA

The Eyebrowse website looks much like Facebook's "news feed," with a list of pages recently visited by members of the Eyebrowse community. The user can toggle between two versions of the list, one that includes all Eyebrowse members and one that includes only those actively "followed" by the user.

By default, the lists are sorted according to a simple ranking algorithm, which factors in the number of people that have visited each page, the amount of time they spent there, and the time of the last visit. But the lists can also be sorted according to each of those factors independently.

The website also provides visualization tools that allow users to view both their own browsing histories and those of the Eyebrowse community at large, as graphs, pie charts, and "word clouds" that represent the frequency with which particular words turn up in the sites visited by Eyebrowse users.

The field trial involved 24 users, who used the system for varying lengths of time, from a week to almost three months. Most shared between 10 and 25 links a day, but participants whose friends were also using the system tended to share more, as many as 60 or even 80 links a day.

"What we have built in terms of potential applications only scratches the surface of what is possible with this data," Zhang says. "That's why the data that people have contributed to Eyebrowse is available in an API on the website for anyone to build on top of or analyze."

"Data has traditionally been used by anyone from corporations to the government," says Mor Naaman, an Associate Professor of Information Science at Cornell University's New Cornell Tech Campus in New York City. "But the goal of this system is to make the data more useful for the individuals themselves, to give them more control, and to make it more useful to communities."

WEARABLE SWEAT SENSORS THAT TRACK YOUR HEALTH

S. Venkatesan, II CS

Blood tests allow doctors to peer into the human body to analyze people's health. But in the future, there may be a less invasive way to

obtain valuable information about a person's health: wearable sensors that use human sweat to look for signs of disease.

Sweat is a rich source of chemical data that could help doctors determines what is happening inside the human body, scientists explained in a new study. Perspiration is loaded with molecules, ranging from simple electrically charged ions to more complex proteins, and doctors can use sweat to diagnose certain diseases, uncover drug use and optimize athletic performance, they said.

"Sweat is pretty attractive to target for noninvasive wearable sensors, since it's, of course, very easy to analyze — you don't have to poke the body to get it — and it has a lot of information about one's health in it," said study senior author Ali Javey, an Electrical Engineer at the University of California, Berkeley.

Commercially available wearable sensors, like the Fitbit and the Apple Watch, track users' physical activities and some vital signs, such as heart rate. However, they do not provide data about a user's health on a molecular level. Now, scientists say "smart" wristbands and headbands embedded with sweat sensors could sync data wirelessly in real time to smartphones using Bluetooth.

Previously, studies of sweat largely relied on perspiration collected off the body in containers that was later analyzed in a lab. Now,

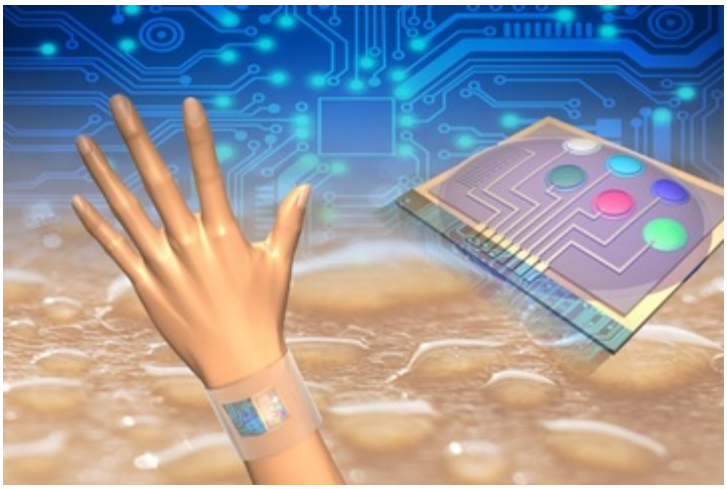
researchers have devised a soft, flexible, wearable sensor array to continuously monitor changes in four molecular components of sweat and to provide real-time tracking of a person's health.

These devices might one day help athletes track their performance and enable doctors to continuously monitor the health of their patients to better personalize their medication, the scientists said.

"This could help tell athletes to take liquids or warn them they are going through heat shock," Javey told Live Science.

The invention uses five sensors to simultaneously track levels of glucose, lactate, sodium and potassium, as well as skin temperature. This data is fed to a flexible board of microchips that processes these signals and uses Bluetooth to wirelessly transmit data to a smartphone. All of these electronics could be incorporated into either a wristband or headband.

"We have a smartphone app that plots the data from sweat in real time," Javey said.



The researchers tested the device on 26 men and women who pedaled indoors on stationary bikes or ran outdoors on tracks and trails. Sodium and potassium in sweat could help check for problems such as dehydration and muscle cramps. Glucose could help keep track of blood sugar levels. Lactate levels could indicate blood flow problems, and skin temperature could reveal overheating and other problems.

In addition, the skin temperature sensor helps adjust the chemical sensors to make sure they get proper readings, the researchers said. For instance, higher skin temperatures increase the electrical signals from glucose, which can make it look as if people are releasing more glucose in their sweat than they actually are.

Previous wearable sweat monitors could track only a single molecule at a time, which could generate misleading information, the researchers said. For example, if a lone sensor showed a drop in a molecule's level, it might not be because that molecule's level is actually

falling in a person's sweat, but rather because sweating has stopped, the sensor has detached from the skin or the sensor is failing. The inclusion of multiple sensors could help shed light on what is happening to a person and the sensor array as a whole.

In the near future, the researchers hope to shrink the device's electronics down and boost the number of molecules it monitors. Such molecules could include heavy metals such as lead, which recently made news for appearing in dangerously high levels in the water of Flint.

In the long term, the researchers hope to conduct large-scale studies with their device on many volunteers. The data such work gathers could help researchers better understand what levels of various molecules in sweat mean for athletic performance and human health.

The researchers have filed a patent on their work, although they are not currently collaborating with anyone to commercialize the sensors.

ELECTROPEN 3

Mr. MOHAN KUMAR

"The Electropen 3 lets you create designs on a simple paper, which can be displayed digitally on smartphones and laptops"

Portronics has launched a new smart pen in India called the Electropen 3, the successor to the Electropen 2. Similar to its predecessor, the new Electropen lets you create designs and drawings on a paper, which can be displayed in real time on a smartphone or a laptop. You can convert your normal handwritten notes and sketches to digital ones.

The Electropen 3 lets you record your designs and drawings in a video format. Furthermore, the device also comes with a voiceover option and a built-in microphone to let you record videos with your voice.

The smart pen utilises a simple pen refill and paper to create content, so you don't need any other accessories to make use of the device.

The Electropen 3 connects with compatible devices via Bluetooth. It can also be connected to a smartphone via USB OTG. As per the

brand, the accessory has a battery life of more than 80 hours. It works with devices supporting Bluetooth 4.0 BLE, OTG, Android 4.4 or higher and Windows 8.1 or higher. The smart pen has been priced at Rs 5,499.

NOKE LOCK

T. SHARMA

II BCA 'C'

About Noke Lock

- Keyless design uses bluetooth to unlock using your mobile device quickly and effortlessly.
- Sharing - Using our iOS/Android app, Noke allows instant and secure sharing and tracking technology
- Strong/Water Resistant - made with hardened steel & boron Noke handles the toughest environments.
- Packed with a long-lasting, replaceable, CR2032 battery that will last about 1 yr with regular use.

Connected

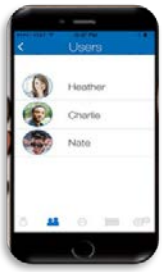
Noke was designed to be the simplest electronic device you own. Noke automatically finds and connects to your Bluetooth 4.0 enabled smartphone.

App Features

Manage multiple locks

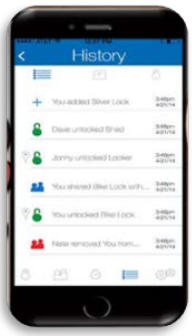
The Noke App makes it easy to manage multiple locks. Name your locks and create custom settings specific to each Noke.

Share with friends



Easily share and revoke access to your locked items. Specify the day, time, location, and duration of access. Full, one-time, and custom (days of week, start/stop times, start/end dates) lock access can be granted (and revoked) to other individuals.

View history



The history tab lets you monitor where, when, and by whom your locks were accessed. You can view the entire history chronologically as a whole, by person, or by lock.

Location history

View map of where your Noke has been accessed. Great for tracking items in transit, including your kids.

Weather Resistant

Noke is built for anywhere and everywhere you might want to use a lock. This is why all buttons, sensors, and batteries are stored internally and protected with silicone O-Rings to keep water and mud from penetrating into the electronics compartment and damaging your lock. It's also made to withstand extreme temperatures, ranging from -10°F to 150°F (-23°C to 65°C).

Strong

Noke is thoughtfully designed to withstand the toughest environments and threatening situations. Built tough with a boron-hardened shackle, the lock is incredibly strong and durable. The Noke also incorporates the latest in anti-shim technology so you can rest assured that your possessions are safe from thieves.

Battery Life & Type

The Noke padlock is packed with a long-lasting battery that will last over a year of regular use. The Noke app will notify you long before it's time to replace the battery. To replace it, simply unlock Noke and remove the back cover. No tools or equipment necessary. Noke uses a standard 2032 watch battery found nearly everywhere.

Jump Start

In the unlikely event you let your battery completely die while in the locked position, you can use an external battery to "jump-start" Noke. So you can unlock it as usual and replace the dead battery. This feature ensures you will never have to worry about being stranded with a dead battery.

The Jump-start capability simply requires you to press your replacement battery against the contact points to locate at the base of the lock. This will give Noke enough power to unlock so you can open Noke, remove the back, and replace the battery for at least another year's worth of use.

Quick-Click

If your phone is ever lost, broken, or dead, the quick-click feature is your reliable back-up plan. When you first receive your Noke, you'll

set up a unique combination of short and long clicks on the shackle. Then, if it ever becomes necessary to open your lock manually rather than via Bluetooth, you can use your custom quick-click code for instant access to your lock.

Lockable Back

When the shackle is in the unlocked position, the back of Noke can be easily removed for quick and convenient battery replacement.

Tech Specs

- **Bluetooth**: 4.0
- **Battery**: 2032 coin cell battery
- **Shackle**: 8mm diameter
- **Device** Compatibility
- **iOS**: iPhone 4s or newer
- **Android**: Devices with BT 4.0 or higher running Android (4.3) or higher
- **Windows Phone**: Devices with BT 4.0 and Windows 10 or higher
- **Water resistant Strength Rating**: IP66
- **Operating Temperature Range**: -10°F to 150°F/-23°C to 65°C
- **Security**: PKI technology and cryptographic key exchange protocol

DEPARTMENT ACTIVITY

Inauguration of ACM-W STUDENT CHAPTER

K.S.Rangasamy College of Arts and Science proudly inaugurated ACM-W Student Chapter with the support of Department of Computer Science and Applications.

The inauguration delightfully started with the welcome address of Ms. Dhivya. Our honorable Chief guest Dr. B. Sampath Kumar, the Former Principal, P.S.G College of Arts and Science, Coimbatore inaugurated ACM-W student chapter and distributed the authorized certificate to the Heads of the Department.

The Head of the Department of Computer Application Mrs. S. Padma introduced ACM-W Student Chapter cell members. The Chief Guest addressed the students about the recent technologies and motivated them to update with the current trends.

With the motivation of our beloved Principal, Dr.V.Radhakrishnan, our students were actively conducted the events.

Various events such as Multitasking, Quiz, Craft work, Vegetable Carving, and Debate were conducted by the student coordinators. The girl students actively participated in all the events and bagged their prizes.

The session came to end with Vote of Thanks and it was one of the memorable events held in our Department.

MAILING LIST – To Whom We Send

- **Mr.B.Murali, HOD of CS, PSG college of Arts and Science, Coimbatore- 14.**
- **Mr.P.Narendran, HOD of CS, Gobi Arts &Science College, Gobichettipalayam-53.**
- **Dr.M.Chandrasekharan, HOD of CS, Erode Arts College (Autonomous), Erode - 09.**
- **Mr.S.SureshBabu, HOD of CS, Thiruvalluvar Government Arts College, Rasipuram.**
- **Dr.K.Thangavel, HOD of CS, Periyar University, Salem-11.**
- **Prof S. Joseph Gabriel, HOD of CS, MazharulUloom College, Vellore – 02**
- **Dr.P.Venkatesan, Principal, Vysya College of Arts and Science, Salem-03,**
- **Dr.P.Swaminathan, Dean, School of Computing, SASTRA University, Kumbakonam.**
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