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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

CONTENTS

Forget Selfie Sticks: This Drone Captures Photos and Videos in Midair

Instead of extending your arm or using a selfie stick to snap shots of you and your crew, you could use a new pocket-size drone — dubbed the "AirSelfie" — to help you remotely capture aerial photos and videos.

The AirSelfie is the brainchild of Italian entrepreneur EdoardoStroppiana, who came up with the idea in 2014. "AirSelfie is specifically designed and produced for people who used to think drone cameras are extremely complicated to use — too expensive and bulky",Stroppiana said.

The AirSelfie is equipped with a 5-megapixel camera that can shoot full high-definition (HD) 1080p video, as well as a 4GB microSD card. Using the AirSelfie, people, groups and companies can take pictures of themselves, their backgrounds and their projects from distances, heights and angles that they never could using their arms or a stick.

The drone's four rotors help it fly up to 65 feet (20 meters) in the air. The flying camera measures only about 3.72 by 2.65 by 0.42 inches (9.45 by 6.73 by 1.07 centimeters) — "smaller than a smartphone," Stroppiana said — and weighs 1.83 ounces (52 grams).

The drone uses sonar to measure its altitude and keeps itself stable with the help of a tiny extra camera to monitor its surroundings for signs of jitter. It is also equipped with gyroscopes, barometers and geomagnetic sensors that help it navigate as it flies.

The AirSelfie is controlled via a free iOS or Android app. The app can make the drone take off; adjust its height and direction; let it hover autonomously; and help users take an HD aerial shot or video with just a push of a button. Users can also activate a 10-second timer, giving people enough time to hide

their phones so they don't appear in the picture or video. The drone can take up to eight consecutive shots.

The AirSelfie uses Wi-Fi to send photos and videos wirelessly to smartphones. The app also allows users to post photos and videos taken with the drone immediately on social media.

After snapping photos, the drone can return to its departure point automatically with the touch of a button. Users can also guide the AirSelfie back manually, and its manufacturers said it is safe for the drone to land on a person's open hand, or even for people to grab the drone while it is still hovering in midair.

A rechargeable lithium polymer battery gives the AirSelfie a flight time of 3 minutes. An accessory known as the Power Bank slips over the AirSelfie like a smartphone case, and can recharge the drone in 30 minutes.

The AirSelfie is the latest advance in the never-ending technological pursuit of the perfect selfie. The minuscule quadcopter fits in the palm of your hand and slides into a custom phone case for storage and charging. It can only fly for three minutes, but that is enough time for its intended use of capturing

a quick group selfie when arms and even selfie sticks can't extend far enough to get everyone in the picture.

The drone can be controlled with one hand via the app (iOS and Android) and can fly up to 20 meters high. When you're ready to snap a photo or video, it will hover autonomously — whether indoor or out.

Three flight modes allow you to pilot the AirSelfie with varying degrees of control. The most basic is Selfie mode, where just on-screen buttons move the drone farther away or closer to you. Selfie Motion Control mode allows you to control the drone with a virtual joystick for more flight options. Rotate the phone into landscape orientation to engage Flight mode, which turns your phone into a classic controller, giving you full freedom. Once you find the perfect spot, the AirSelfie will automatically hover.

When you're done flying, simply pluck the AirSelfie out of the air, which can be done safely with your bare hand. Return it to its case and it will recharge in 30 minutes.

If you don't mind a little extra bulk on your phone, you can carry it with you at all times.

Pocket-Size Device Lets You Print from Anywhere

A new mobile robotic printer that is only a little bigger than three stacked hockey pucks will enable people to print anywhere and on any size page of paper.

Smartphones, tablets and laptops make it easy for people to work on the go, but traditionally, printers have been cumbersome to lug out of the office.

Zuta Labs, based in Jerusalem, reasoned that printers nowadays are essentially a print head running back and forth on a moving piece of paper. The company's approach involves placing a print head on a set of small wheels and letting it run across a sheet of paper, thus allowing printers to become smaller.
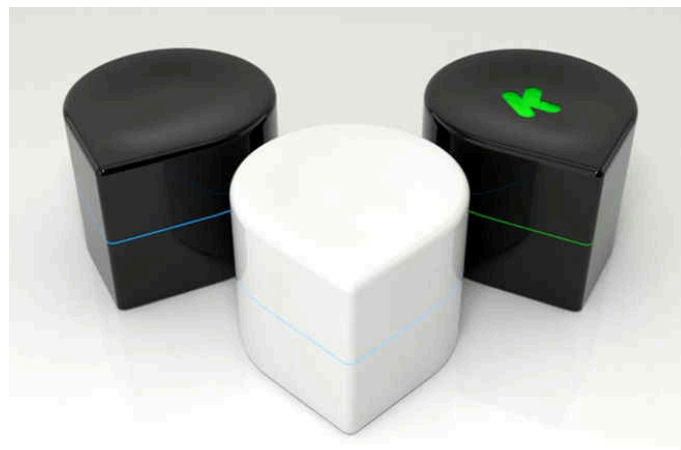
Zuta Labs' mobile printer allows people to print while on the go.

The new Zuta Pocket Printer is about 4 inches (10.2 centimeters) wide and long and 3 inches (7.5 cm) high, and weighs about 12 ounces (350 grams). It can connect wirelessly to smartphones, tablets, laptops and PCs via Wi-Fi, and is supported by Android, iOS, OS X and Windows. A free app from the company lets you use the printer via a mobile device; a laptop or PC can also select the printer for use just like any other wirelessly connected printer.

To print, a person switches on the device, aligns it with the corner of a sheet of paper and sends the document to it. The printer can print one average A4 page, measuring 8.27 by 11.7 inches (21 by 29.7 cm), every 50 to 60 seconds with a resolution of 300 dpi. Zuta Labs noted that its printer can print on any standard size piece of paper, and that, in principle, it could print on any surface. The printer's "omni-wheels" help it turn and move in any direction on a surface. Laser sensors help control the movement, speed and location of the device.

If a person sends several pages to the device, the printer will stop when it gets to the bottom of the first page and wait

until it is placed at the top of the next page. Users can then tap on the mobile app, and the printer will continue to print.

Zuta Labs said the printer's rechargeable lithium-polymer battery can last about 1 hour, on average — long enough to print about 60 pages. The device charges via a micro-USB port, and takes about 3 hours to charge fully.

Sweat Detectors - Tiny Sensors Use Perspiration to Track Health

Imagine if taking a snapshot of your health were as easy as slapping a sticker on your skin. A new study finds that a tiny adhesive sensor can read what's going on in your body based on your sweat, and relay information about your well-being wirelessly to a smartphone. This type of wearable sensor could work as an alternative to blood tests to assess people's health one day, according to the researchers.

Perspiration is a rich chemical full of molecules ranging from simple electrically charged ions to more complex proteins that can shed light on what is happening inside the human body. Doctors can use sweat to diagnose certain diseases, uncover drug use and reveal insight into athletic performance. Sweat also can be gathered far less invasively than blood, said study senior author John Rogers, a materials scientist and director of Northwestern University's Center for Bio-Integrated Electronics in Evanston, Illinois.

In the new study, scientists embedded chemical sensors and other devices into a soft, flexible silicone rubber disc, about the size and thickness of a quarter that can easily stick to skin. The device is designed to collect and analyze sweat for key biomarkers, or markers of health. For instance, the sensor can show how people are responding to exercise, including whether someone needs to make adjustments, such as drinking more water or replenishing electrolytes.

This wearable lab contains "microfluidics" designed to route fluids inside themselves in much the same way that microelectronics do with electrons. Specifically, the sensor directs sweat down a number of microscopic channels that are

about 0.02 inches (0.5 millimeters) wide into compartments about 0.16 inches (4 mm) in diameter. Each of these chambers measures specific biomarkers, such as pH, lactate, chloride and glucose levels.

Chemical reactions within the sensor's compartments result in visible changes in color that reveal what levels of a given biomarker are present in the sweat. When a smartphone is brought near the sensor, near-field communications technology within the smartphone — the same kind used in mobile payment systems such as Google Wallet and Apple Pay — uses short-range radio waves to power and talk to electronics within the sensor. Then, the electronics in the sensor cause a smartphone app to take a photo of the sensor, and the app can then analyze this image to calculate biomarker levels, the researchers said.

Conventional methods of analyzing sweat capture perspiration with absorbent patches taped to the skin and analyze them later, off-site. Sweat sensors that other scientists have developed can be worn on the skin. But these other sensors still rely on absorbent patches as opposed to microfluidic channels, so they do not analyze the rate at which people sweat,

Rogers said. Moreover, unlike previous sweat sensors, the new device does not require batteries, he added.

In experiments, Rogers, Huang and their colleagues placed their sensor on the forearms and backs of 21 healthy volunteers to analyze their sweat. Nine of the participants cycled indoors in a fitness center under controlled conditions and a long-distance bicycle race in arid and complex outdoor conditions.

The data from the sensors that the indoor cyclists wore reliably matched those from conventional methods of analyzing their sweat, according to the scientists. The sensors on the outdoor cyclists also performed as expected, and stayed on despite the complex and unpredictable conditions of the desert. In addition, the devices stayed on all the volunteers without causing discomfort or irritation, the researchers said.

In terms of immediate commercial applications, the scientists said they "can see this device used in fitness, wellness and exercise — for instance, for athletes to track sweat rate and electrolyte loss," Rogers said.

Augmented-Reality Helmet Could Give Cyclists Extra Eyes on the Road

An augmented-reality helmet that gives cyclists a 360-degree view of the road could help prevent accidents, according to the device's designers.

Unlike cars, bicycles don't come with rearview mirrors, which is why British product design firm DCA created the Optic helmet. The futuristic-looking headgear features front and rear cameras and a drop-down visor that can overlay live-streaming footage from the rear camera onto a rider's field of view.

The visor can also display proximity warnings, such as if a vehicle is overtaking the rider, and alert them to potential collisions by combining data from the cameras and ultrasonic sensors on the front and back of the helmet.

In addition, the Optic helmet can overlay GPS navigation information and journey statistics for riders who want to track their performance. The design is currently just a concept, but it won "Best of the Best" at the prestigious Red Dot Design Awards last month.

Richard Price, an industrial designer at DCA and the brains behind the project, said the helmet is aimed at combatting the roughly 20,000 cycling causalities that happen in the United Kingdom ever year, but he was also inspired by his own experiences as a cyclist.

The futuristic-looking headgear features front and rear cameras and a drop-down visor that can overlay live-streaming footage from the rear camera onto a rider's field of view.

Because the helmet is still just a concept design, some of the nuts and bolts have yet to be decided, such as the exact method for projecting video onto the visor. However, Price said Google Glass has already shown this is feasible, as has a

motorcycle helmet designed by a firm called Skully, which also projects a feed from a rearview camera onto a visor.

The Optic helmet will be able to connect to a smartphone via Bluetooth, to allow maps and routing information to be uploaded, but actual navigation will be carried out by the helmet using its onboard GPS unit, according to DCA. It can be controlled either by a touchpad next to the visor or by using gestures picked up by the front camera.

Users can customize what is shown on the visor to suit their needs and to ensure the display doesn't become distracting, Price said. "They can decide for themselves what is unobtrusive and what they can deal with," he added.

The bulk of the electronics are in the top of the helmet, which, Price says, is the area statistically least likely to be impacted during a crash. The electronics package includes a memory card to record the video feeds in case the cyclist wants to review any incidents. These recordings can be accessed via Bluetooth, and Price added that they deliberately designed the helmet so that the rear camera is very obvious.

"We draw attention to it to show other road users that they are under surveillance," he said. "This links to the trend of

people having recording equipment attached to their helmet, the idea being that people will drive more safely if they know they're being record."

Since the designs were made public, Price said the design firm has received plenty of positive feedback from cyclists and cycling gear companies. But, actually commercializing the device will require a considerable investment, so it's unclear when, or if, the helmet will be available to consumers.

Dan Salisbury, a senior industrial designer at DCA who helped Price with the helmet, said initial conversations with helmet companies have suggested an easier route to market might be to create a kit that can be retrofitted to existing helmets.

This could be a first step before integrating the technology into a full helmet and would also give users more choice by allowing them to simply attach the system to their favorite helmet.

"Some people might want a more aggressive sporty style or a more vintage one, that's why it might make more sense to create technology that doesn't come with a helmet, but fits to one you already have," Salisbury said.

Are You Ready for a Computer That Reads Your Mind?
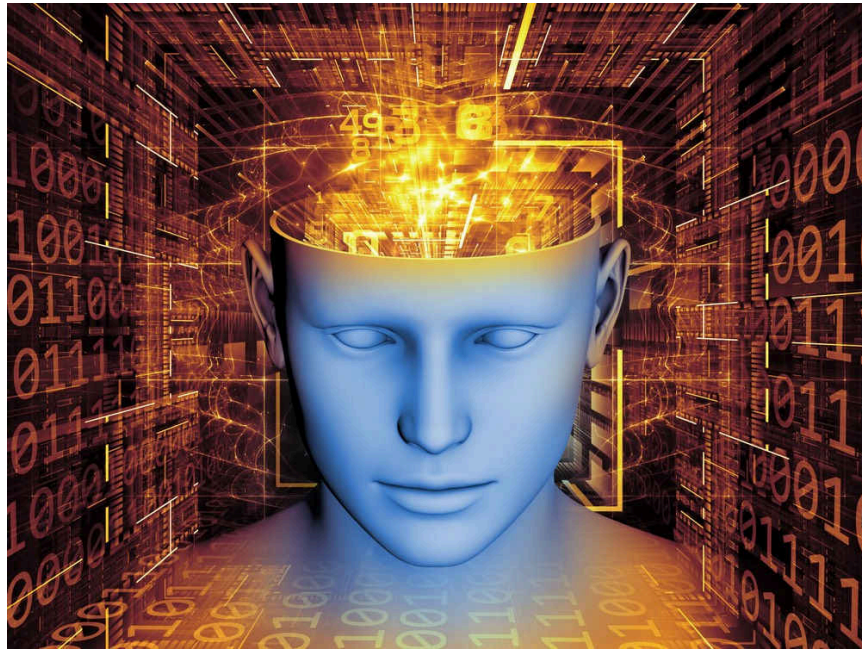
This article was originally published at The Conversation.

The first computers cost millions of dollars and were locked inside rooms equipped with special electrical circuits and air conditioning. The only people who could use them had been trained to write programs in that specific computer's language. Today, gesture-based interactions, using multitouch pads and touchscreens, and exploration of virtual 3D spaces allow us to

interact with digital devices in ways very similar to how we interact with physical objects.

This newly immersive world not only is open to more people to experience; it also allows almost anyone to exercise their own creativity and innovative tendencies. No longer are these capabilities dependent on being a math whiz or a coding expert: Mozilla's "A-Frame" is making the task of building complex virtual reality models much easier for programmers. And Google's "Tilt Brush" software allows people to build and edit 3D worlds without any programming skills at all.

My own research hopes to develop the next phase of human-computer interaction. We are monitoring people's brain activity in real time and recognizing specific thoughts (of "tree" versus "dog" or of a particular pizza topping). It will be yet another step in the historical progression that has brought technology to the masses – and will widen its use even more in the coming years.

Reducing the expertise needed

From those early computers dependent on machine-specific programming languages, the first major improvement allowing more people to use computers was the development of the

FORTRAN programming language. It expanded the range of programmers to scientists and engineers who were comfortable with mathematical expressions. This was the era of punch cards, when programs were written by punching holes in cardstock, and output had no graphics – only keyboard characters.

By the late 1960s mechanical plotters let programmers draw simple pictures by telling a computer to raise or lower a pen, and move it a certain distance horizontally or vertically on a piece of paper. The commands and graphics were simple, but even drawing a basic curve required understanding trignometry, to specify the very small intervals of horizontal and vertical lines that would look like a curve once finished.

The 1980s introduced what have become the familiar windows, icons and mouse interface. That gave nonprogrammers a much easier time creating images – so much so that many comic strip authors and artists stopped drawing in ink and began working with computer tablets. Animated films went digital, as programmers developed sophisticated proprietary tools for use by animators.

Simpler tools became commercially available for consumers. In the early 1990s the OpenGL library allowed

programmers to build 2D and 3D digital models and add color, movement and interaction to these models.

In recent years, 3D displays have become much smaller and cheaper than the multi-million-dollar CAVE and similar immersive systems of the 1990s. They needed space 30 feet wide, 30 feet long and 20 feet high to fit their rear-projection systems. Now smartphone holders can provide a personal 3D display for less than US$100.

User interfaces have gotten similarly more powerful. Multitouch pads and touchscreens recognize movements of multiple fingers on a surface, while devices such as the Wii and Kinect recognize movements of arms and legs. A company called Fove has been working to develop a VR headset that will track users' eyes, and which will, among other capabilities, let people make eye contact with virtual characters.

Send Passwords Securely Through Your Body Instead of Wi-Fi

A smartphone can be used to send a secure password through the human body and open a door with an electronic smart lock.

Rather than rely on easy-to-hack Wi-Fi or Bluetooth signals, researchers have developed a system that uses the human body to securely transmit passwords.

Computer Scientists and Electrical Engineers have devised a way to relay the signal from a fingerprint scanner or touchpad through the body to a receiving device that is also in contact with the user. These "on-body" transmissions offer a secure option for authentication that does not require a password, the researchers said.

"Let's say I want to open a door using an electronic smart lock," said study co-lead author MerhdadHessar, an Electrical Engineering Doctoral Student at the University of Washington. "I can touch the doorknob and touch the fingerprint sensor on my phone and transmit my secret credentials through my body to open the door, without leaking that personal information over the air."

"What is cool is that we've shown for the first time that fingerprint sensors can be re-purposed to send out information that is confined to the body," study senior author Shyam Gollakota, an Assistant Professor of Computer Science and Engineeringat the University of Washington, said in a statement.

The researchers devised a way to use the signals that are generated by fingerprint sensors and touchpads as output, corresponding to data like a password or access code. Rather than transmitting sensitive data "over the air" to a receiving device, the system allows that information to travel securely through the body to a receiver that's embedded in a device that needs authentication.

In tests so far, the system worked with iPhones, Lenovo laptop trackpads and the Adafruit touchpad (a trackpad that can

be used with computers). The tests were successful with 10 people who had different heights, weights and body types, and worked when the subjects were in different postures or in motion. The on-body transmissions reached bit rates of 50 bps for the touchpads and 25 bps for the phone sensors — fast enough for a simple password or numerical code. Bit rates measure the amount of data that can be transmitted per second, with higher rates representing more data (for instance, a small file rather than a simple password).

On-body transmissions could also be applied to medical devices, such as glucose monitors or insulin pumps, which require secure data sharing to confirm the patient's identity, according to the researchers.

Once they have more access to the software used by fingerprint sensor manufacturers, the researchers aim to continue researching how to provide greater and faster transmission options.

New High-Tech Friendship Bracelets Teach Kids How to Code

Jewelbots are friendship bracelets that also teach kids how to code.

Friendship bracelets have been a mainstay of middle-school fashion for decades. From knotted threads to plastic lanyards to interlocking charms, each generation seems to find its own unique way of displaying its social network. And for today's tweens, the latest incarnation could be wearable technology, but with some educational benefits.

A new product called Jewelbots aims to elevate friendship bracelets from fashionable status symbols to an interactive, educational tool that teaches kids to code.

The bracelet's coding aspect was always the primary goal for Jewelbots co-founders Sara Chipps and Brooke Moreland. Chipps, now CEO of the Company has been coding since her preteen years, and in 2010, she founded a national nonprofit called Girl Develop It, which offered a series of low-cost coding classes for adult women. But Chipps said she heard repeatedly from these women that they wished they could have learned coding skills when they were young.

The idea sparked Chipps' interest and she designed a bracelet that would change color based on a girl's outfit. Unfortunately, the jewelry fell flat in testing groups, Chipps said, because the girls were bored.

"We have to give them something they love so they learn and code," Chipps told Live Science. So, she went directly to the girls and asked them for advice. Their nearly unanimous answer was to design something centered on friendship, according to Chipps.

With their input, Chipps came up with Jewelbots. The bracelet is simple enough: electronics and LED lights enclosed within a plastic charm, stamped with a flower design, and threaded onto a woven strap. The included Bluetooth-enabled charm can be programmed to react to up to eight friends, glowing in a unique color when a certain friend is nearby. Girls can also send secret messages to each other through lights and vibrations, Chipps said.

The Jewelbots friendship bracelet can be paired with a smartphone app that transforms it from a simple piece of jewelry into an educational tool. Using very rudimentary coding, girls can program their Jewelbot to respond to almost anything — from changes in the weather to a new Instagram post, according to Chipps.

Jewelbots communicate via Bluetooth, piggybacking on nearby networks to extend their reach. The bracelet is not enabled with wireless or GPS technology to protect kids' privacy. In fact, the bracelet could be programmed to send a text to a parent or guardian if a child is feeling unsafe.

Recent Software Releases

What is GNU?

GNU is an operating system that is free software—that is, it respects users' freedom. The development of GNU made it possible to use a computer without software that would trample your freedom.

What is the Free Software Movement?

The free software movement campaigns to win for the users of computing the freedom that comes from free software. Free software puts its users in control of their own computing. Non-free software puts its users under the power of the software's developer.

What is Free Software?

Free software means the users have the freedom to run, copy, distribute, study, change and improve the software.

Free software is a matter of liberty, not price.

More precisely, free software means users of a program have the four essential freedoms:

- The freedom to run the program as you wishes, for any purpose (freedom 0).

- The freedom to study how the program works, and adapt it to your needs (freedom 1). Access to the source code is a precondition for this.

- The freedom to redistribute copies so you can help your neighbor (freedom 2).

- The freedom to improve the program, and release your improvements to the public, so that the whole community benefits (freedom 3). Access to the source code is a precondition for this.

Developments in technology and network use have made these freedoms even more important now than they were in 1983.

More about GNU

GNU is a Unix-like operating system. That means it is a collection of many programs: applications, libraries, developer tools, even games. The development of GNU, started in January 1984, is known as the GNU Project. Many of the programs in GNU are released under the auspices of the GNU Project; those we call GNU packages.

The name "GNU" is a recursive acronym for "GNU's Not Unix." "GNU" is pronounced *g'noo*, as one syllable, like saying "grew" but replacing the *r* with *n*.

The program in a Unix-like system that allocates machine resources and talks to the hardware is called the "kernel". GNU is typically used with a kernel called Linux. This combination is the **GNU/Linux operating system**. GNU/Linux is used by millions, though many call it "Linux" by mistake.

GNU's own kernel, The Hurd, was started in 1990 (before Linux was started). Volunteers continue developing the Hurd because it is an interesting technical project.

Here is a list of recent GNU releases, with links to their announcements on the info-gnu mailing list.

February 05, 2017

- GNU ddrescue 1.22 - a data recovery tool. It copies data from one file or block device (hard disc, cdrom, etc) to another, trying to rescue the good parts first in case of read errors.

- GNU Ddrescuelog is a tool that manipulates ddrescue

<u>January 23, 2017</u>

- GNU userv 1.2.0- a tool for system administrators, who often find themselves with a program running as one user which needs to be able to do certain things as another user.

- It is also a component for application authors who wish to do what isnow known as `privsep', using a process call interface.

- GnuPG 2.1.18 - allows mapfiles, shows mapfile contents, converts mapfiles to/from other formats, compares mapfiles, tests rescue status, and can delete a mapfile if the rescue is done.

- The GNU C Library version 2.25 - used as *the* C library in the GNU system andin GNU/Linux systems, as well as many other systems that use Linuxas the kernel.

- The GNU C Library is primarily designed to be a portable and high performance C library. It follows all relevantstandards including ISO C11 and POSIX.1-2008. It is alsointernationalized and has one of the most completeinternationalization interfaces known.

February 03, 2017

- sed-4.4

- GNU Wget

It comes with major improvements for Metalink, IDNA2008 for international domain names, an option to call external toolsfor fetching user/password, several bug fixes and improvements.

To encrypt and sign data and communication features aversatile key management system as well as access modules for public keydirectories. GnuPG itself is a command line tool with features for easyintegration with other applications. A wealth of frontend applicationsand libraries making use of GnuPG are available. Since version 2 GnuPG provides support for S/MIME and Secure Shell in addition to OpenPGP.

GnuPG is Free Software. It canbe freely used, modified and distributed under the terms of the GNUGeneral Public License.

Three different branches of GnuPG are actively maintained:

- GnuPG "modern" (2.1) comes with the latest features and is suggestedfor most users.

- GnuPG "stable" (2.0) is the currently mostly used branch which will be maintained until 2017-12-31.

- GnuPG "classic" (1.4) is a simplified version of GnuPG, required on very old platforms or to decrypt data created with PGP-2keys.

January 22, 2017

- GNU gcal 4.1 - a program for calculating and printing calendars.

- This release fixes two minor issues, in addition to all the improvements inherited from gnulib.

- glpk 4.61 - intended for solving large-scalelinear programming (LP), mixed integer linear programming (MIP), andother related problems. It is a set of routines written in ANSI C89 andorganized as a callable library.

An option was added to build a re-entrant version of the package suitable for running in a multi-threaded environment.

This option is enabled by default on configuring the packageif the compiler used supports the thread local storage class specifier (e.g. _Thread_local or __thread).

A re-entrant version of the package allows running multiple independent instances of glpk in different threads of a multi-

threaded application. Note that glpk is not thread-safe bydesign, so if the application calls glpk routines from multiple threads, no thread may access glpk program objects (glp_prob,glp_tree, etc.) created by other threads; besides, each threadbefore termination should call the API routine glp_free_env to prevent memory leak.

Some changes were made to allow compiling the package using stdcall calling convention (this is needed only for compilingGLPK with MSVC to run under MS Windows).

• GNU MCSim version 5.6.6 - a simulation package which allows you to design your ownmodels (eventually dynamic, via ODEs) and to perform simplesimulations, Monte Carlo stochastic simulations, or Bayesian inferencethrough Markov Chain Monte Carlo simulations.

Features:

- Fixes a bug that affected the code generated for R by mod

- Introduces the Per Transit input function;

- Allows symbols in Events times and magnitudes;

- Extends the tempered MCMC specification.

January 21, 2017

• GDB 7.12.1- the GNU Debugger, is now available via anonymousFTP. GDB is a source-level debugger for Ada, C, C++, Objective-C,Pascal and many other languages. GDB can target (i.e., debug programsrunning on) more than a dozen different processor architectures, and GDBitself can run on most popular GNU/Linux, Unix and Microsoft Windowsvariants.

January 19, 2017

• datamash-1.1.1- a command-line program which performs basic numeric,textualand statistical operations on input textual data files.

January 18, 2017

• GNU Screen v.4.5.0

January 14, 2017

• vc-dwim-1.8

January 13, 2017

• GNU gperf v3.1 - a perfect hash function generator. For a given list ofstrings, it produces a hash function and hash table, in form of C or C++code, for looking up a value depending on the input string. The hashfunction is perfect, which means that the

hash table has no collisions,and the hash table lookup needs a single string comparison only.

Output from the gperf program is used to recognize reserved words in theGNU C, GNU C++, and GNU Pascal compilers, as well as with the GNU indentprogram.

The full set of changes new to GNU gperf version 3.1 are:

* The generated C code is now in ANSI-C by default. If you want tosupport pre-ANSI-C compilers, you need to provide the option--language=C on the command line or %language=C in the source file.

* The 'len' parameter of the hash function and of the lookup function isnow of type 'size_t' instead of 'unsigned int'. This makes it safe tocall these functions with strings of length > 4 GB, on 64-bit machines.

* Added option --constants-prefix.

* Added declaration %define constants-prefix.

January 12, 2017

- GNU ed 1.14.1 - an 8-bit clean, more or less POSIX-compliant implementation of the standard Unix line editor.

January 10, 2017

- AUCTeX11.90 - provides by far the most wide-spread and sophisticated environment for editing LaTeX, TeX, ConTeXt and Texinfo documents with Emacs or XEmacs. Combined with packages like RefTeX, flyspell and others it is pretty much without peer as a comprehensive authoringsolution for a large variety of operating system platforms and TeX distributions. It supports document-dependent completion and syntax highlighting, easily accessible menus, jumping to error locations inthe source file, a number of editing shortcuts, intelligentindentation and filling of text during entry, and WYSIWYG previews ofgraphical elements like math formulas right in the Emacs source buffer, by virtue of its preview-latex component. AUCTeX needs volunteers in particular for non-programming tasks: documentation writing, tutorials, translations, reference material, sleuth work, testing.

January 08, 2017

- GNU 8sync 0.4

January 05, 2017

- Goodbye to GNU Libreboot

A package maintainer can decide to step down, to stop maintaining thepackage for the GNU Project. Many GNU

packages have been in use formany years and are no longer maintained by their original developers.

When a package's maintainer steps down, that doesn't by itself breakthe relationship between GNU and the package. If it is left without amaintainer but is still useful, the GNU Project will usually look fornew maintainers to work on it.

A few months ago, the maintainer of GNU Libreboot decided not to workon Libreboot for the GNU Project any more. That was her decision tomake. She also asserted that Libreboot was no longer a GNU package --something she could not unilaterally do. The GNU Project had todecide what to do in regard to Libreboot.

Thus, Libreboot is no longer a GNU package. It remains free software.

January 04, 2017

- sed-4.3

Norton Virus Definitions (64-bit)

The **Norton Virus Definitions** allows manual update of your Norton AntVirus and Norton Security in case that you do not have internet connection or in case auto update fails.

To manually **update virus definitions** download and run the apropriate file (32-bit or 64-bit) and follow the instructions.

MediaInfo Lite

MediaInfo is free software that will supply technical and tag information about a video or audio file.

Features:

- Read many video and audio file formats
- View information in different formats (text, sheet, tree, HTML...)
- Customize these viewing formats
- Export information as text, CSV, HTML...
- Graphical Interface, Command Line, or DLL versions available
- Integrate with MS-Windows shell (drag 'n' drop, and Context menu)
- Internationalization: display any language on any operating system
- Localization capability

What information can I get from MediaInfo?

- General: title, author, director, album, track number, date, duration...

- •Video: codec, aspect, fps, bitrate... •

- Audio: codec, sample rate, channels, language, bitrate...

- •Text: language of subtitle •

- Chapters: number of chapters, list of chapters

What format (container) does MediaInfo support?

- Video: MKV, OGM, AVI, DivX, WMV, QuickTime, Real, MPEG-1, MPEG-2, MPEG-4, DVD (VOB)... (Codecs: DivX, XviD, MSMPEG4, ASP, H.264, AVC...) •

- Audio: OGG, MP3, WAV, RA, AC3, DTS, AAC, M4A, AU, AIFF... •

- Subtitles: SRT, SSA, ASS, SAMI...

GeoGebra

GeoGebra is dynamic mathematics software for all levels of education that brings together geometry, algebra, spreadsheets, graphing, statistics and calculus in one easy-to-use package. **GeoGebra** is a rapidly expanding community of millions of users located in just about every country. **GeoGebra** has become the leading provider of **dynamic mathematics software**, supporting science, technology, engineering and mathematics (STEM) education and innovations in teaching and

learning worldwide. Putting the world's leading **dynamic mathematics software** and materials in the hands of students and teachers everywhere!

GeoGebra Quick Facts:

- Graphics, algebra and tables are connected and fully dynamic
- Easy-to-use interface, yet many powerful features
- Authoring tool to create interactive learning materials as web pages
- Available in many languages for millions of users around the world
- Open source software freely available for non-commercial users

YUMI

YUMI (Your Universal Multiboot Integrator) is the successor to MultibootISOs. It can be used to **create a Multiboot USB Flash Drive** containing multiple operating systems, antivirus utilities, disc cloning, diagnostic tools, and more. Contrary to MultiBootISOs which used grub to boot ISO files directly from USB, **YUMI** uses syslinux to boot extracted

distributions stored on the USB device, and reverts to using grub to Boot Multiple ISO files from USB, if necessary.

Aside from a few distributions, all files are stored within the Multiboot or **YUMI** folder (depending on version), making for a nicely organized Multiboot USB Drive that can still be used for other storage purposes.

Creating a **YUMI** Multiboot MultiSystem **Bootable USB Flash** Drive. **YUMI** works much like Universal USB Installer, except it can be used to install more than one distribution to run Live from your USB. Distributions can also be uninstalled using the same tool!

YUMI was intended to be used to try to run various "LIVE Linux" Operating Systems from USB. Installing Linux from the **YUMI** created USB Drive to a Hard Drive is not officially supported. If the installer portion of any Live Linux distro does work, consider it a bonus.

ProgDVB (64-bit)

ProgDVB is a software which allows you to **watch SAT-Television and listen to Radio channels** directly from satellite by using DVB-PCI cards with hardware decoders on the board, SAT-dish, and personal x86-compatible computers. This

software has options for working with network broadcasting and Audio or Video recording of the stream to different digital-media formats.

ProgDVB and **ProgTV** is two is two independent user interfaces which can work together from one folder at one list of channels, settings etc. ProgTV is aimed at use with remote control(HTPC). **ProgDVB** contains more functions but is intended for use by a mouse. Thus it is very convenient to use both interfaces.

ProgDVB Main Functions:

- High Definition TV support including H.264/AVC
- Picture-in-picture support as well as independent simultaneous recording/playback of several channels from one or more devices
- Mosaic fast channels preview
- Support for the majority of DVB, ISDB-T and ATSC devices including DiSEqC and CAM interfaces support
- Support for all digital TV audio formats: MPEG, AC3, AAC,...
- Time shifting functionality using the RAM or disk buffer of unlimited size

- 10 Bands equalizer

- TV and Radio channels recording

- Playback from disk based files

- Electronic program guide (EPG) from Digital TV or XmlTV,JTV.

- Teletext

- Subtile(Teletext, image-based and closed captions)

- Support for VR, VMR7,VMR9 and EVR renderers including OSD (except VR) independently from channel type or signal presence

- Network broadcasting

- Skins for OSD and GUI

- Both Win32 and full-fledged Win64 versions are available

- Interface Language Localizations

Support for various types of data sources:

- Internet TV and Radio. About 8000 channels in the list.

- DVB-S (satellite), DVB-S2, DVB-C (cable), DVB-T, DVB-T2, ATSC, ISDB-T

- IPTV

- Kartina TV, Rodina TV, OTT Club, Shura TV, Sovok TV.

- Playback from a file.

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5

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10M users!

Instagram, Pinterest, and Tumblr have gained ten million new users over the past 12 months, making them the fastest growing social media

More Women Use the Top Visual Social Media

54%

46%

tumblr.

33%

8%

Pinterest

20%

15%

Instagram