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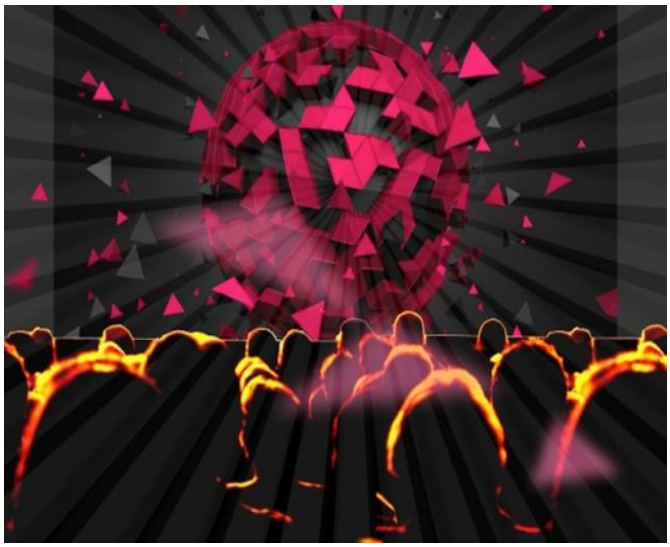
CONTENTS

LATEST UPDATES WORLD

You Watch 3D Movies without the Funky Glasses:

Someday, moviegoers may be able to watch 3D films from any seat in a theater without having to wear 3D glasses, thanks to a new kind of movie screen. The new technology, named Cinema 3D, overcomes some of the barriers to implementing glasses-free 3D viewing on a larger scale, but it's not commercially viable yet, the researchers said when describing their findings.



(A new prototype display could enable people to watch 3D movies from any seat in the theater, without having to wear 3D glasses.)

Although 3D movies can offer unique perspectives and experiences, one major drawback is the cumbersome eyewear that moviegoers typically have to wear. Although glasses-free 3D strategies already exist, these technologies currently cannot be scaled up to movie theaters. For example, glasses-free 3D methods for TV sets often use a series of slits known as a parallax barrier that is placed in front of the screen. These slits allow each eye to see a different set of pixels, creating the illusion of depth.

However, for parallax barriers to work, they must be placed at a set distance from viewers. This makes parallax barriers difficult to implement in larger spaces such as theaters, where people can sit at a variety of distances and angles from the screen. In addition, glasses-free 3D displays have to account for the different positions from which people are watching. This means that they have to divide up the limited number of pixels they project so that each viewer sees an image from wherever he or she is located, the researchers said.

"Existing approaches to glasses-free 3D require screens whose resolution requirements are so enormous that they are completely impractical," study co-author Wojciech Matusik, an associate professor of electrical engineering and computer science at MIT, said in a statement. But in the new method, the researchers used a series of mirrors and lenses to essentially give viewers a parallax barrier tailored to each of their positions. "By careful design of optical elements, we can achieve very-good-quality 3D content without using glasses," study co-author Piotr Didyk, a researcher at the Max Planck Institute for Informatics and Saarland University, both in Germany, told Live Science.

"This is the first technical approach that allows for glasses-free 3D on a large scale," Matusik said in a statement. In addition, the scientists reasoned that instead of displaying images to every position in a theater, they would need to display images only to a relatively tiny set of viewing positions at each theater seat.

"In our solution, we exploit the layout of the audience in a cinema," Didyk said. The scientists developed a simple Cinema 3D prototype that could support a 200-pixel image. In experiments, volunteers could see 3D versions of pixelated figures from a number of different seats in a small theater.

The scientists cautioned that Cinema 3D is currently impractical to implement commercially. For instance, their prototype requires 50 sets of mirrors and lenses, but

the screen is just barely larger than a pad of paper. The researchers hope to build a larger version of their display and further boost the image resolution. "It remains to be seen whether the approach is financially feasible enough to scale up to a full-blown theater," Matusik said in a statement. "But we are optimistic that this is an important next step in developing glasses-free 3D for large spaces like movie theaters and auditoriums."

The scientists detailed their findings July 26 at the SIGGRAPH computer graphics conference in Anaheim, California.

"Linux Turns 25" Containers Cloud & IOT presents New Opportunities:

After a quarter of a century, there are plenty of opportunities for Linux to grow -- but there are still challenges ahead. Where next for the open source project?

"Linux has a substantial opportunity in new technology segments, such as IOT, containers and cloud, but also in the industry segments that sometimes take time to adapt and evolve," says Frank Fanzilli, director of The Linux Foundation and former Global CIO for Credit Suisse First Boston.

He adds that in the mid-term challenges could emerge around maintaining such an enormous scale of contribution, while also sustaining the performance and quality associated with Linux. "That's a good problem to have and the Linux community needs to continually evolve in order to meet these demands," Fanzilli says.

Cloud and Enterprise Data Centers

Linus Torvalds may still hold out hope that Linux will one day dominate in the desktop -- "I'm still working on it, it's been 25 years, I can do this for another 25," he said at an event this year -- but it is in the server OS market that Linux's biggest effect has been felt, powering the majority of web servers as well as the major search engine providers.

Many of the large cloud providers - including market leader Amazon Web Services - are built around Linux, and the OS has played an increasingly large role within more typical enterprise business for new applications such as big data. Red Hat senior solutions architect Martin Percival expects this growth to continue. "We are literally just at that point of tipping over to parity in the server market, where Linux is now being deployed more than something like Microsoft's server operating system," he says.

"It is not that they are going to go away overnight but we have reached that tipping point and that acceptance." Quocirca analyst Clive Longbottom believes a fragmented ecosystem of distributions could see some Linux vendors struggling, unless they are able to offer greater differentiation.

"There are too many Linux server distros out there; for many distributors, the problem will be to gain sufficient critical mass to continue successfully in the market," he says. With Ubuntu and Red Hat the

dominant players and SUSE and CentOS reasonably-sized runners up, we then come down to the likes of Debian, Oracle Linux, Mageia and ClearOS, amongst many others.

"As each offers little in differentiation from the rest - apart from any additional functionality built around the kernel and the ecosystem around the distro - it really comes down to how commercially supportable the distro is. "The lower-end players will find this difficult to maintain if overall revenues do not pick up."

Maintaining a focus both on the development of enterprise distributions and other fast-moving areas such as the internet of things will be a challenge, according to Igor Ljubuncic, principal engineer at Rack space.

"Overall, the kernel development will remain tightly controlled and focused on the business, both in the short and long term," says Ljubuncic. "This model is not likely to change much, even though there will be more collaboration across industries."

He adds that the biggest challenges, however, come from the rest of the ecosystem: "This is going to keep on evolving at an exponential pace, to the point where the increased fragmentation will become unsustainable and there will be a convergence toward standards, most likely forced by the big players."

Containers

Another of the major successes for Linux in recent years has been the huge interest in containers - described by some as a potential replacement for virtual machines.

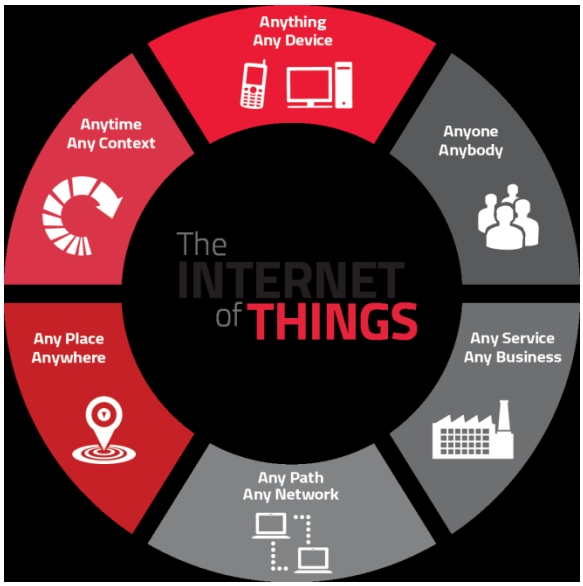
Cloud Foundry CEO, Sam Ramji, highlights Google's donation of cgroup -- a key element of the Linux kernel that enables containerisation -- as perhaps "the most significant change to the trajectory of Linux" and one which will continue to meet demand for cloud applications and the internet of things.

"Containers as a metaphor for isolation has made Linux not only the default operating system for cloud computing, but the standard to which even Windows aspires," he says, adding that containers in Windows "are based on the interfaces standardised in Linux."

"In the next several years as cloud computing dominates IT, Linux will need to support complex cloud provider relationships ("multi-multi-tenancy") and ever-more secure and lightweight compute packages for IoT deployments. I expect that we'll see a lot more development of Linux capabilities for containers in the near future."

Internet of Things (IOT)

Earlier this year the Linux Foundation announced the Zephyr project -- a small-footprint kernel designed for running on IoT devices with limited resource.

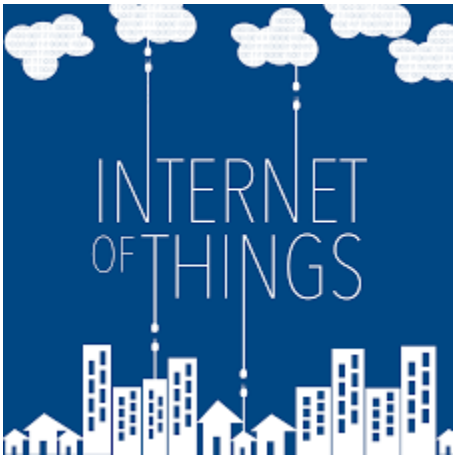


Cloud Foundry's Ramji says the approach used in IoT projects could have an impact on wider Linux development. Ramji explains: "Dynamically generated microkernels such as demonstrated by Unik can help bind the application to 'just enough OS' for deployment to global clouds, local clouds, and even IoT environments including devices and gateways."

"This will probably put pressure on Linux to demonstrate just how small and finely tuned it can get. Will it make sense to dynamically generate Linux distributions to support applications in a container-based data centre? The drive for compute density is going to be a high-priority area for Linux."

Last week Google also announced it is working on its own operating system, Fuschia, which doesn't make use of the Linux kernel. This could one day offer an alternative platform for Android and other small computing devices, but it is extremely early days for the project.

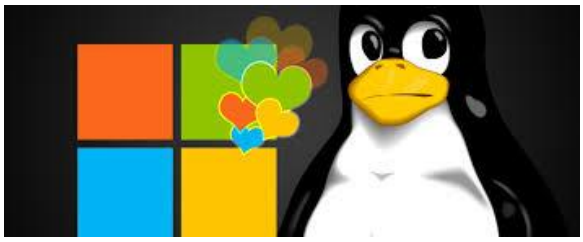
Ramji does not necessarily see Linux coming up against Google's operating system, should it grow.
"I suspect Google has enough smart engineers and resources to experiment in very large ways to advance their understanding of hard problems," he says. "Fuchsia will certainly do that."



"Whether that knowledge ends up coming back to Linux or remains a sustained effort is yet to be seen. The Fuchsia target of devices with tens of kilobytes of RAM looks like a very difficult place for Linux to flourish in; but Linux continues to evolve and surprise us thanks to the global community's constant hacking and exploration."

Microsoft continues to embrace Linux:

Recent years have seen what a near-unthinkable proposition was once: Microsoft embracing Linux. SQL Server now runs on Linux, while the Azure cloud platform has supported most of the main distress for some time.
According to Quocirca's Longbottom, this trend is set to continue.



"Microsoft is going through a lot of changes, and without the large immovable object of Ballmer in place, Nadella is looking a lot more flexible and open to new ideas," he says.

"As a platform play, Microsoft is very fragile: Windows Server is losing ground to Linux, although not at the speed the early Linux Ivory-Towerists expected or wanted, and it has failed at the mobile device side of things, and it is not very strong in tablets either.

"Therefore, Microsoft has to decide where it will gain its revenues going forwards."

This will be the case for Microsoft's cloud services in particular.

"Azure is a very strong cloud, and it already supports most of the main Linux distros," Longbottom says.

"This is the future for Microsoft - the provision of an open platform that is interoperable with other cloud systems, supports the majority of applications and services available in the market and is a platform that scales and performs at least as well, if not better, than other public clouds.

"This means that Microsoft has to continue in its support of Linux."

STUDENTS CORNER

Poet's dream:

Poet’s dream is fantastic
No restriction in place
Their pens mighty majestic
Their words silk, brimmed with lace

Poet’s dream is like flashes
You have explored the real facts of life,
While facing day’s bad, in nightmare
No one comes with you

Poet’s dream might have synergetic ideas
Piercing through darkest cloud
Treasure rising from ashes
Heartbeat heard clear and loud

Poet’s dream is of golden
Liquid shining bright gem
Breathing truth, and enhearten
Redden rose, throw stem

Tushar Bansal
MCA(2016)

Android Version’s:

The version history of the Android mobile operating system began with the release of the Android alpha in November 2007. The first commercial version, Android 1.0, was released in September 2008. Android is continually developed by Google and the Open Handset Alliance (OHA), and has seen a number of updates to its base operating system since the initial release.

Code name	Version number	Initial release date
N/A	1.0	23 September 2008
	1.1	9 February 2009
Cupcake	1.5	27 April 2009
Donut	1.6	15 September 2009
Eclair	2.0 – 2.1	26 October 2009
Froyo	2.2 – 2.2.3	20 May 2010
Gingerbread	2.3 – 2.3.7	6 December 2010
Honeycomb	3.0 – 3.2.6	22 February 2011
Ice Cream Sandwich	4.0 – 4.0.4	18 October 2011
Jelly Bean	4.1 – 4.3.1	9 July 2012
KitKat	4.4 – 4.4.4	31 October 2013
Lollipop	5.0 – 5.1.1	12 November 2014
Marshmallow	6.0 – 6.0.1	5 October 2015
Nougat	**7.0**	**22 August 2016**

Versions 1.0 and 1.1 were not released under specific code names, but since April 2009's Android 1.5 "Cupcake", Android versions have had confectionery-themed code names. Each is in alphabetical order, with the most recent being Android 7.0 "Nougat", released in August 2016.

Deepak Gupta
(MCA-2015)

FACULTY ARENA

Scholarly Articles

Smart phones are changing real world privacy settings:

Smartphone users have a radically different conception of behavior in public spaces than their conventional phone counterparts. They are more likely to reveal private information in public spaces, and less likely to believe that their digital conversations are irritating to those around them.

With endless applications, high-speed wireless Internet access, and free messaging services, smart phones have revolutionized the way we communicate. But at what cost? According to researchers at Tel Aviv University, the smart phone is challenging traditional conceptions of privacy, especially in the public sphere.

Dr. Tali Hatuka of TAU's Department of Geography and Dr. Eran Toch of TAU's Department of Industrial Engineering have teamed to measure the impact of the smart phone phenomenon on privacy, behavioral codes, and the use of public space. Their early results indicate that although spaces such as city squares, parks, or transportation were once seen as public meeting points, smart phone users are more and more caught up in their technology-based communications devices than their immediate surroundings.

Smart phone users are 70 percent more likely than regular cellphone users to believe that their phones afford them a great deal of privacy, says Dr. Toch, who specializes in privacy and information systems. These users are more willing to reveal private issues in public spaces. They are also less concerned about bothering individuals who share those spaces, he says.

Inside a private bubble

Dr. Hatuka says that smart phones create the illusion of "private bubbles" around their users in public spaces. She also believes that the design of public spaces may need to change in response to this technology, not unlike the ways in which some public areas have been designated as "smoking" and "non-smoking." Dr. Toch also note that smart phones and personal computing devices are becoming more "context-aware," adjusting themselves in terms of brightness and volume to the user's location and activity.

To examine how smart phones have impacted human interactions in public and private spaces, the researchers designed an in-depth survey. Nearly 150 participants, half smart phone users and half regular phone users, were questioned about how telephone use applied to their homes, public spaces, learning spaces, and transportation spaces.

While regular phone users continued to adhere to established social protocol in terms of phone use -- postponing private conversations for private spaces and considering the appropriateness of cell phone use in public spaces -- smart phone users adapted different social behaviors for public spaces. They were 50 percent less likely to be bothered by others using their phones in public spaces, and 20 percent less likely than regular phone users to believe that their private phone conversations were irritating to those around them, the researchers found.

Feeling lost without a phone

According to the researchers, smart phone users were also more closely "attached" to their mobile devices. When asked how they felt when they were without their phones,

the majority of smart phone owners chose negative descriptors such as "lost," "tense," or "not updated." Regular phone users were far more likely to have positive associations to being without their phones, such as feeling free or quiet.

The next phase of the study will be a more in-depth analysis of how smart phone users incorporate this technology into their daily lives. It requires users to install an application that the researchers developed called Smart Spaces.

The application is designed to track where the participants go over a three-week period and how they use their phones while there. This will give researchers a better idea of how smart phone users interact in both public and private spaces during the course of a typical day.

Dr. Hatuka and Dr. Toch believe that their complete findings can reveal clues about the future of public space and how it will be designed in order to meet the needs of those it serves. "We are entering a new phase of public and private spaces," says Dr. Hatuka, suggesting that physical spaces need to be redesigned as arenas which could enhance personal interaction.

Value Based Articles

Enterprise Software Developers continue to use Flawed Code in Apps:

Companies that develop enterprise applications download over 200,000 open-source components on average every year -- and one in 16 of those components have security vulnerabilities.

This is indicative of the poor state of the software supply chain, a problem that's only getting worse with the increased reliance on third-party code combined with bad software inventory practices.

According to software development lifecycle firm Sonatype, third-party components account for 80 percent to 90 percent of the code found in a typical enterprise application today.

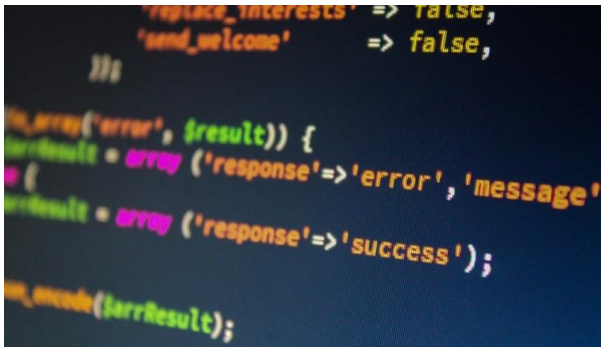
The number of downloads from the largest largest public repository of open-source Java components reached 31 billion last year, a 82 percent increase over 2014, the company found.

Sonatype runs the hosting infrastructure for the Central Repository, the default repository for Apache Maven, SBT and other Java software building tools. The company does not police what goes in and out of the repository; that task falls to the community of open source developers who contribute components to it.

The average company downloads more than 229,000 components annually, but only around 5,000 of them are unique, Sonatype said in its "State of Software Supply Chain" report released Monday. Of those downloaded components, 1 in 16 has security defects.

This is reflected in production too. An analysis of 25,000 enterprise applications revealed that around 7 percent of the components used in them had at least one known vulnerability.

Components that are over two years old account for 80 percent of the risk, but unfortunately they also represent over half of all components used in applications.



Sonatype estimates that it would cost an enterprise with 2,000 applications about $7.4 million to remediate only 10 percent of the defects and vulnerabilities introduced by consuming components.

Supply chain management practices that are common in other industries, such as manufacturing, would help software developers reduce their maintenance costs considerably. These include doing a strict selection of component suppliers, choosing only the highest-quality components and tracking when and where those components were used.

PARTICIPATION IN RESEARCH & DEVELOPMENT ACTIVITIES

A Research paper of **Mr. Ajeet Kumar**, entitled "**The Impact of Agile based Software Engineering in Interactive Art Installation**" is accepted at **International Conference on Advances in Computing, Communication & Automation (ICACCA 2016)** which is Technically Co-Sponsored By **IEEE** & will be held on 30 September and 01 October 2016.