

School of Technology

THERE IS NO SUCH THING AS



WHEN WE THROW ANYTHING



AWAY IT MUST GO



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Microsoft

has partnered with Meta



During Meta's Connect conference in October 2022, Microsoft CEO Satya Nadella said that Microsoft teams will integrate with Quest devices and that Microsoft will provide a way to stream Windows apps to Meta's headsets, TechCrunch reported. Nadella also revealed that Microsoft's streaming game service, Xbox Cloud Gaming, will arrive on Quest devices sometime within the coming months.

"We're bringing the Microsoft Teams immersive meeting experience to Meta Quest to give people new ways to connect," Nadella said, noting that custom avatars will eventually come to the experience. Horizon Workrooms, Meta's VR space for collaboration, will connect with Teams, he added – allowing people to join a Teams meeting directly from Workrooms. On the Windows end, Nadella said that Microsoft 365 will come to Quest in a way that lets users interact with content from productivity apps like Word, Excel, PowerPoint, and Outlook.



Space X enters the Internet Race





Reference: https://www.gadgetsnow.com/tech-news/elon-musks-spacex-is-back-in-india-seeks-dot-permit-to-launch-starlink/articleshow/94938200.cms





EIon Musk's SpaceX has entered the national satellite internet race, as has been widely rumored. The third business to apply for a GMPCS license in the nation is SpaceX. OneWeb, supported by the Bharti Group, and Jio Satellite Communications, the satellite division of Reliance Jio Infocomm, are the other two businesses that have received GMPCS licenses. Nelco, a satellite communications corporation owned by the Tata Group, Telesat, a Canadian company, and Amazon are also rumored to be interested.



GCC to employ 2 million people



Global capability centres (GCC) are expected to employ 2 million people in India by 2025, up from the current 1.3 million, a new report on the GCC landscape by Nasscom and Zinnov said. GCCs are the technology centres of foreign companies in India. They used to be called captive centres, but many in the industry now prefer the term GCCs, given the growing maturity of these centres and the greater autonomy they now enjoy.

The GCC market size is expected to nearly double to \$60 billion, from \$35 billion, in the same period, and the number of GCCs is expected to grow to 2,000, from the current 1,430. In the same span of time, it is expected that the number of GCCs could rise to 2,000 from the existing 1,430 and that the market size will nearly double to \$60 billion from \$35 billion. According to the research, the next wave of GCCs will be led by healthcare, SaaS, and tech startups that were growing in India. India has become a key player in the story of global technology. With a vast pool of digitally skilled IT workers, GCCs in India are driving digital transformation charters for their parent organisations.

THE **IBM** WORLDWIDE BUSINESS



A broad range of services which include (but are not limited to) hardware and software is provided by one of the largest information technology businesses in the world, International Business Machines, also known as IBM. The Dallas Fort Worth International Airport aims to improve the experience of the modern-day traveler using Artificial Intelligence by collaborating with Soul Machines. All the clients of IBM benefit from its ground-breaking advancements in the field of artificial intelligence, industry-specific computing cloud services, general consultancy, and quantum computing. All these functions are provided support by IBM's commitment and dedication to accountability, reliability, inclusivity, and Dallas responsibility. Fort Worth International Airport is one of the airports with the greatest number of connections worldwide. It contributes to a significant extent towards the creation of jobs in the North Texas region by linking communities who travel for business or pleasure.

IBM is one of the most prominent providers of global artificial intelligence, hybrid clouds, and consulting skills. Their operations are spread across a hundred seventy-five countries, providing clients with help in cutting costs, gaining a competitive edge against their peers, and leveraging data insights to improve their overall business operations. Close to some three thousand eight-hundred government and corporate entities from various key industrial sectors including telecommunications, healthcare, and financial services rely on IBM's Red Hat hybrid OpenShift and cloud for implementing all their digital transformations securely, effectively, and swiftly.

IBM Institute for Business Value has remained at the institution's center for thought leadership for almost twenty years, and it remains motivated to provide technology-driven, research-based strategic information which will help decision-makers in taking informed decisions in their businesses. Each year, they poll, interview, and participate in engaging activities with thousands of leaders, consumers, and experts from their individualistic position right at the nexus of technology, business, and society, and combining all these viewpoints into insights that will inspire the future.



THE Amazon Development Center



Amazon is committing \$5 billion to enhance Thailand's cloud computing infrastructure. Over the next 15 years, Amazon has announced plans to invest \$5 billion in Thailand to modernize the country's infrastructure as part of its cloud computing division.AWS said in a statement that the funds would be used to create data centers and to buy goods and services from regional businesses.

The business also intends to establish an infrastructure base in Bangkok, Thailand, to serve local customers better. Supattanapong Punmeechaow, Thailand's deputy prime minister, called AWS's plan to build data centers in the country "a significant milestone that will bring cutting-edge cloud computing services to more organizations and help us deliver our Thailand 4.0 ambition to create a digitized, value-based economy."More than 200 services, including storage, robotics, and artificial intelligence, are available on the AWS cloud platform.AWS last month announced plans to set up a local hub in Mexico to increase bandwidth for customers while also opening its first cloud data center in the UAE.

Infosys used A

A comprehensive solution for businesses to scale and secure AI-powered change. An executive at Infosys subsidiary Edgeverve Systems, which provides artificial intelligence and automation services, said that in an environment where central banks are raising interest rates and there is inflationary pressure on business costs, global companies may turn to automation to cut costs.

Despite a difficult macroeconomic situation, funding pledges for digital divers continue to be part of the plan according to the chief executive of Tata Consultancy, India's largest IT service provider by market valuation. Following the release of their quarterly financial reports last week, India's IT service providers said that businesses in places like Europe and the US that were spending big during the pandemic have now become cautious. The top four IT service providers in India have drastically slashed hiring as the economy in Europe slows and the likelihood of a US recession rises. Just 28,836 individuals were added on a net basis by TCS, Infosys, Wipro, and HCL together in the September quarter of FY23, which is less than half of what they added in the quarter before and the quarter before that. Wipro added 605 the least. According to a number of CEOs, the world's macroeconomic uncertainties are growing, thus businesses should exercise caution.



Supply chain management has been changing as a result of the advancement of (AI)artificial intelligence, which takes the shape of machines that behave and respond much like people. Companies are using computer vision, machine learning,

Infosys applied AI supports firms in adopting a thorough strategy and plan for scaling enterprise-grade AI. In order to create fresh business solutions and perceptive experiences, it combines the power of AI, analytics, and the cloud. natural language processing, speech recognition, and robotics more and more to work smarter.

Material Control

Businesses are also making significant investments in material management systems. The majority of autonomous vehicle use takes place in a warehouse or other controlled setting. Autonomous vehicles can "perform marvels in that type of environment" with the appropriate software. There are numerous choices available inside four walls," Nelson claims. Due to a shortage of drivers in the transportation sector, using autonomous vehicles in the "outside" environment is particularly enticing to companies. The idea of using a remotely piloted drone system, which would initially be deployed inside the boundaries of a city, is one of the more immediate potentials. "Down the road, there might be a facility that transports materials back and forth.

THE ASSISTIVE MOUTHGUARD Lets You Control the Device By Biting Down



The layout comes from the National University of Singapore (NUS) in conjunction with collaborators from Tsinghua University. The occlusal manipulate stress sensing gadget became evolved to offer an opportunity present assistive technology, to consisting of voice reputation and eye that have monitoring, positive boundaries because of interference. environmental interference and imprecise. Although brain-pc interfaces progressed dramatically have in current years, the era continues to be invasive and calls for cumbersome stressed gadgets. Bite force, regularly used as a parameter to evaluate masticatory (chewing) function, is a promising vicinity wherein it's far poorly understood or poorly understood. Because dental occlusion gives rather a specific manipulation and calls for minimum skill, Professor Liu and his group have brought a brand-new idea of the assistive era the usage of joint touch models.

Have you ever wondered about controlling devices with our mouths?

assistive facilitates he era selling independence and autonomy for humans with disabilities. Unfortunately, that technology additionally has huge drawbacks. For example, voice reputation calls for huge running reminiscence and perform ought in low-noise to environments, even as eye monitoring calls for a digital digicam in front of the person and is liable to fatigue. A new interactive mouthguard that permits customers with confined or no guide mobility to govern close by digital gadgets by biting into the device.

Unique bite "Our chew-induced optoelectronic gadget can translate complicated chew styles into statistics consumption with 98-diploma rigor. The NUS group has designed for the primary time a sensor that carries a chain of touch pads with exceptional colored phosphors - substances that produce mild reactions to pressure.

The community of touch pads is placed interior of a bendy mouthguard. The chew consequences in mechanical deformation of the touch pads, which then produce mild various colorations and intensities. Different styles of mechanical pressure may be outstanding with the aid of using fiber sensors via proportional luminescence measurement. This may be quantified and processed through the use of gadgets to gain knowledge of algorithms.

The accrued statistics are then used high-precision for faraway manipulation and operation of many digital devices, inclusive of wheelchairs, computers, and smartphones. In addition to assistive era packages, the group additionally sees packages for his or her new stress sensor in bendy electronics, synthetic skin, and dental diagnostic devices. The NUS group says that its new chunk sample invention overcomes conventional boundaries regularly observed in present-day assistive technologies, which includes a demand for huge running memory, the want for gadgets for use in quiet environments, and front-installed eyemonitoring cameras giving customers fatigue. This particular optoelectronic

The researchers are presently running to patent their era and commercialize it as soon as it's been clinically validated. They also are seeking to enhance the processing pace of the tool and simplify the schooling process. Although desired variations of the discovery were illustrated and described, it needs to be understood that the discovery isn't always such. constrained Many as modifications, alterations, variations, substitutions, and equivalences will arise for individuals professional in this area without departing from the spirit scope of the discovery as and described with the aid of using the extra requirements. This technological innovation might play a prominent role

chew management system – is affordable, lightweight, compact, and calls for much less education time as compared to current assistive technologies. in the upcoming days.



AERIAL **DRONE BASE Stations**

very small technological innovation is always a huge leap taken toward the growth of society. Drones are one such with multi-faceted innovation functions. One such use we can emphasize is to give better 5G connectivity. The 5G networking system is advancing at a quick pace and might take over the older 4G networking soon. It will revolutionize the system by facilitating better communication and faster networking. 5G can give better bandwidth and increase the data rate from 1 to 20 GBPS. But, for a vast country like India, there are limitations such as the requirement for more cell towers and an increase in radiofrequency radiation. Drones can be useful to clear this complication.



Drones can form a cluster in the stratosphere called Base Systems which can completely change the present networking system. These drones are interlinked and replace the present cell towers. This spatial system will not limit the antennas like the cell towers. The beam steering technology present in drones can allow mobility in any direction.

The deployment of Aerial Base Stations (ABSs) mounted on board Unmanned Aerial Vehicles (UAVs) is emerging as a promising technology to provide connectivity in areas where terrestrial infrastructure is insufficient or absent. Aerial Base Stations (ABSs) can be deployed to provide connectivity to ground terminals (GTs) in remote areas with no cellular infrastructure.

Life on earth is adversely affected by cell towers. These drones can clear all the loopholes in cell towers. They don't take up any space on the land and also don't cause much radiation as they present in the stratosphere. This is not just more sustainable for nature but also cost-effective when compared to the land base systems as the area covered under drone bandwidth is more and land occupied is completely eliminated. This system is even effective to provide the network to remote areas which are still suffering from many problems because they have no medium to connect with this superfast technological word which is getting updated every day

MECHANISM OF AERIAL DRONE BASE SYSTEM

Data is transmitted through electromagnetic radio signals to the end-user or consumer. With the introduction of this system, we don't require a myriad of transceivers anymore. With time, aerial drone systems can make a difference world huge in communication. This is an innovative idea to look forward to. A strategic difference of ABSs with respect to the static classical network architecture is their ability to deploy on-demand networks at specific locations to in-built properties their of

The working of a drone base system starts from the base station where the data is propagated. The antenna is inserted in the stratosphere and then, that relay signals to, and from devices below. Such an airborne transceiver could blanket urban areas with wireless coverage more cheaply than satellite-based alternatives while avoiding the need to build forests of mast-mounted base stations on the ground. This aerial base system collects the

mobility, flexibility in threedimensional space, adaptive altitude, and symmetric rotation.

data and acts as a mediator for the transmission of cellular data.



12

Current Technology



3D Computer Vision



he 3D computer vision is understanding the geometry and depth of the images. In this, we give input in 2D form and it will be converted into a 3D format. It is a closer representation of our lives in a 3D world. It is applicable driving, autonomous robotics, in remote sensing, medical treatment, the design industry, and education. Cameras attached to the vehicles will be recording live footage and allows computer vision to create 3D maps, this is autonomous driving.

Robotic vision with 3D allows the machine to know whether an object is lying down, upright, or hanging. In medical treatment 3d computer vision helps to create 3d images using 2d pictures. Computer vision helps to identify the symptoms of diseases by reading images. In education, students can easily learn by 3d representation of images. It will be more interesting for students to learn using 3d reconstruction. Fundamental problems in 3d computer vision.

- Depth Extraction
- Object classification / Recognition
- Object registration/ Pose Estimation
- Object Detection
- Scene Segmentation (instance and semantic)
- 3D Reconstruction

In-depth extraction, two cameras are placed on the same vertical and depth axis at a fixed horizontal distance from each other. Its goal is to recover 3rd dimension. The output is called a depth map. It first converts the 2D image into a greyscale image. The greyscale range is from 000 to 255. The nearest point is 255 and the farther point is 000.

Object classification, we will be given an object and need to identify what the object is. In object recognition, we have to identify the object and the pose of the object, by the pose we mean transition and rotation.

The most common approach is to use 3D feature detectors and descriptors. And also, we should match the source with the target description. Popular features include the spin image, PFH, FPFH, PPF, SHOT, ISS, 3D-SIFT, and 3D-SURF.

Object registration, we have 2-point clouds and our goal is to align them as a single object. They are from the same object but they have been translated or rotated so we have to move them so that every point is aligned with the corresponding point in the other image. The iterative closest point technique is the most used. It starts from (close) correspondence initial some between the two sets. We should find the transformation (t and r) and iteratively refers to the information to minimize an error metric.

Deep learning has achieved unpredicted success in almost all areas of 2D computer vision in the past. There has not been that much deep learning successful work same in 3D computer vision. But it may be achieved in the future.

Input views and cameras





DALL-E 2 AND **Stable Diffusion:** The New-Age Painters





Which painting do you think looks better, the left or the right?

rrespective of whichever one you liked, you might have noticed both have a similar concept behind them: people, or more specifically students, walking in the rain. The images above were not painted by humans but were instead generated using artificial intelligence on the prompt "Students walking in the rain, Van Gogh style". This is called Text to Image Generation, where users type a prompt and an Al generates an image on the prompt. It aims to assist other designers similar and professionals in creating pictures that focus on a specific topic, idea, or requirement.

The crowd puller however is the fact that the prompt can vary from being simple to as absurd as the user can think, making the only limit our imagination!

An Al-based text-to-image generation has recently become very popular with the release of DALL-E 2 in June and has again gained a sudden boom in interest with the release of another program called Stable Diffusion at the start of September. Stable Diffusion provides a free and open-source alternative to the expensive DALL-E 2, which led to many people asking the question "Does Stable Diffusion's release signify the end of DALL-E 2?"



Before we answer that question, we must first understand how both AI models work and what their differences are. Stable Diffusion and DALL-E 2 work on a "diffusion model", which in the simplest terms means using a dataset of images to gradually build an image that meets the prompt's requirements by repeatedly modifying it. Where Stable Diffusion and DALL-E 2 differ though is in the size and types of images used in the dataset for training the AI. DALL-E 2 had a training dataset of 250 million images[1] while Stable Diffusion had a training dataset of 2.3 billion images[2], nearly 10 times the size of DALL-E's dataset. Additionally, DALL-E's dataset seems to be predominantly filled with stock images. Although the bigger dataset might give the impression of Stable Diffusion being superior, the result of this is that DALL-E 2 generally produces more refined and sophisticated images, even with simple inputs. Any novice user can type a prompt and DALL-E 2 will more probably generate a better output than Stable Diffusion. On the other hand, Stable Diffusion requires long and detailed prompts to receive the same output. However, when provided with such prompts and in the hands of a professional, Stable Diffusion can generate more aesthetically beautiful and accurate images.

The biggest difference between DALL-E 2 and Stable Diffusion is censorship. Stable Diffusion has strong emphasis on Free Speech and the user having the ability to generate whatever they would wish to. DALL-E 2 on the contrary believes in a level of censorship to ensure ethical usage of their program, such as not being able to create demeaning images of politicians for propaganda purposes. This does create certain restrictions in the prompts the users can input.

All of this means that in the end, neither DALL-E 2 nor Stable Diffusion will replace the other, as even though they work on the same concept and technology, both of them serve different purposes and are meant for different audiences. What they do signify however is the rapid advancement of AI and technology and how the general public can now access such powerful tools.



THE Walkman



Music is the one language that everyone on the earth understands and loves! In medieval times music was only enjoyed by the people when an artist had the will to perform live, later on, there were radios which were loud and not private. But now, all of us own a music subscription and enjoy it by simply putting on our headphones. What was the one big revolutionary invention that changed the way we access music? THE WALKMAN! Another very fascinating thing in this story is that Sony came up with a very unique idea of marketing; they hired young adults to walk around in public wearing a Walkman and offering a test of the product to them. The "Walkand "Walk-women" men" in advertisements were created to be the ideal reflections of the viewing audience. A major component of the Walkman advertising campaign was the overspecialization of the device. Prior to the Walkman, the common device for portable music was the portable radio, which could only offer listeners standard music broadcasts. Having the ability to customize a playlist was a new and exciting revolution in music consumption. Potential buyers had the opportunity to choose their perfect match in terms

The Sony Walkman was the first of its type; no other device was able to help people listen to music whilst they walk on the streets. As the saying goes; "necessity is the mother of invention", the most interesting part of this story is that the co-founder of Sony, Masaru Ibuka wanted to be able to listen to music on long flights. He asked executive deputy president Norio Ohga to design a playback-only stereo version optimized for headphone use. That was when Sony Walkman was introduced to the world! of mobile listening technology. The ability to play one's personal choice of music and listen privately was a huge point selling of the Walkman, especially among teens, who greatly contributed to its success. A diversity of features and styles suggested that there would be a product that was "the perfect choice" each for consumer.



"Invention breeds inventions", just like the Sony Walkman which was that one kind of invention which paved the path for many more amazing modern day portable audio devices such as iPods, MP3 players and many more.

METAVERSE -Is the future here?



Metaverse is an idea that has been tossed around for over a decade. The term "metaverse" was first used in Neil

From shopping, watching movies, and business meetings to making friends, you do everything at one-stop. can blockchain, Technologies like cryptocurrency, AR & VR, artificial intelligence, IoT, and 3D modeling, power the metaverse and keep it running. Many organizations and MNCs have been racing to develop a Virtual Environment to bring the attention of the users and give them the next-generation experience. In Oct 2021 Facebook changed its name to meta to prove that they are serious about the virtual reality future and wants to grow its wings into it. Companies like Epic games have also spent millions of dollars virtual reality developing games. Qualcomm, Nvidia, valve, and HTC are also some of the many companies racing to establish foundations in the metaverse which could give economic opportunities like game creation, virtual retail, and digital asset trading which could make money in the real world. According to estimates predictions, there would be 23.5 million jobs based on AR & VR by 2030. Metaverse is a great resource for creators it could make their dreams look very real. Rappers and music creators are also performing in the metaverse where concerts audiences can have the live experience without the need of leaving their homes.

Stevenson's 1982 novel, Snow Crash. Stevenson's metaverse was a virtual place where characters could go to escape a dreary totalitarian reality. The term "Metaverse" is made up of the words "meta" (virtual) and "verse" (universe). Metaverse creates a virtual interactive experience through VR glasses where you can do anything and almost everything you want, from friends making to experiencing pleasuring views from anywhere in the world, from the comfort of your couch to the physical world. Although it's in the early stages metaverse shows a promising future.

Metaverse completely revolves around virtual reality which refers to accessing the digital world using hardware like an oculus head which uses special sense, and motion tracking controllers to give a real-life experience. Everything about the way you live your life will be different within 10 years. In the present world, about two third of them have the access to the internet We must determine how many people will adopt the metaverse. The metaverse opens unlimited possibilities for the future, and each of them is exciting in its way.

What do you think, will the metaverse prove to be as revolutionary as it promises, or will it fade away as another trendy gimmick?

FACULTY Achievements









FACULTY Achievements I-Hub Data Mobility Summit 2022



Dr. Jaswanth Nidamanuri presented his research posters and got accepted by IIIT Hyderabad

Event Name: I-Hub Data Mobility Summit 2022

Venue: IIIT Hyderabad

Date of event: 23rd and 24th September 2022

Research Poster Title: "Quantifying the Road Quality for Safe and Improved Drivability for Unconstrained Traffic Environments"



STUDENTS Achievements



Blank Screen Coding

The technology club at Woxsen University conducted a 'Blank screen coding contest' for all the Techies on 16th October 2022. This contest comprises the challenge of a student coding on a blank screen which is an ultimate test for their coding and typing skills.

Congratulate the Winners







Rank - 1 Vaigarai Sathi B. Tech - 2024

Rank - 2 Adip Krishna Guduru B. Tech - 2026





Rank - 4 S. Sreeshanth B. Tech - 2025

Rank - 5 Sanjith B. Tech - 2026

Rank - 3 Sathvik Andela B. Tech - 2024



Rank - 6 K. Varun Kumar B. Tech - 2026

STUDENTS Achievements GLEE Workshop



In May 2022, Ananya Y. and I signed up online for the Great Lunar Exploration for Everybody (GLEE) workshop, which consisted of around 200 teams being selected from all over the world to program tiny lunar modules (called lunasats). These modules will then be sent to the moon for exploration and data collection in Nasa's 2023 mission.

It is a one-time event that was free for all, and we got through the selection process. These selections were based on Essays written by the interested teams.

The workshop is currently going on, and so far the modules have been very well-planned and extremely well-organized. It is a self-paced workshop consisting of 12 modules in total, each taking approximately an hour to study and understand.

-Aditya Hegde Btech -2025



Events:

Charity For ANANTAPUR Floods



Anantapur was flooded after heavy rains hit the area. Hundreds of people were displaced from their homes as water from flooded lakes entered his 12 colonies in the city and his 5 colonies in Rudrampet Panchayat. Roads in the affected areas turned into streams, and in some places, houses were under three feet of water.

Responding to their recent cause Anantapur Floods school of technology took initiative. They raised a fund of Rs. 36,000/- by screening movies for students and gave it to Anantapur Collecter Ms. S Nagalakshmi.



UPCOMING Events:



Tech Expo

- School Of Technology

Ethical Hacking Workshop

- Technology Club

Hackathon for SOT Students

- Corporate Relation Cell

Al Summit

- Technology Club and AI & Robotics Club



FUNZONE TECH-TRIVIA

1. The word technology was coined in 330 BC by the one and only Aristotle. You may think of technology as modernized or contemporary, but its etymology dates back to Aristotle's time.

2. The QWERTY keyboard can slow your typing speed on the computer. This keyboard was designed to address the jam issues of typewriters. However, the most used letters are not place together on the keyboard.

3. Xerox is not a verb for photocopying but is a name of a company that creates and sells xerographic technology.

Many people often use the word "xerox" when they want to photocopy something. Yet, they do not know that it is actually a company name called Xerox Holdings Corporation.

4. Motorola produced the first-ever portable mobile phone. In 1983, Motorola paved the way for smartphone manufacturing companies by creating the first portable phone called DynaTAC 8000X. It is bulky and has keypads and an antenna.

5. No one yet has verified the identity of Bitcoin's founder. Satoshi Nakamoto is the only the pseudonym of the most popular cryptocurrency in the world, the bitcoin. Up until now, his real identity remains a world mystery.

RÍ BRÍED TEXT TO IMAGE GENERATION

Making the most out of the recently released Stable Diffusion, we are holding a contest to see who has the wildest imagination out of all of you. Use https://beta.dreamstudio.ai/ to generate an image using a prompt of your choice and upload the resultant image here. The top 5 images will be displayed in our next issue of Techzone along with your name!



TECHNOLOGY CROSSWORD

DOWN

1. Usually comprises the display device, circuitry, casing, and power supply.

3. An error, flaw, failure, or fault in a computer program or system that causes it to produce an incorrect or unexpected result or to behave in unintended ways.

4. A client software program that runs against a Web server or other Internet server enables users to navigate the World Wide Web (WWW) to access and display data.

6. The collection of physical parts of a computer system.

7. Sending an email, posting photos on asocial media site, and using your webcam.

8. A part of a computer system or network that is designed to block unauthorized access while permitting outward communication.



 9. The combination of typeface and other qualities, such as size, pitch, and spacing.

12. Any computer-generated information displayed on the screen, printed on paper, or in machine-readable forms, such as disk and tape.

13. A word or group of words that act as a way to cross-reference to other documents or files on the computer.

ACROSS

2. Data that is entered into or recieved by a computer.

5. The exclusive right, as recognized separately in each country, to publish and sell literary, artistic, or musical materials.

10. A software system that links topics on the screen to related information and graphics, which are typically accessed by a point-and-click method.

11. copy (data) from one computer system to another, typically over the Internet.

14. Usually consists of eight bits.

15. A measure of the amount of computational work that a computer system performs.

. Download 12. Output 13. Link 14. Byte 15. Load

Copy

nswer

Hardwa

THE EDITORIAL TEAM

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