The Future IS...



Faktabaserade optimistiska nyheter med den arge optimisten



WALL-Y | I min read

/ Tre västafrikanska länder börjar vaccinera mot malaria

Benin, Liberia och Sierra Leone har börjat vaccinera barn mot malaria. Vaccinet har visat en betydande minskning av malariasjukdomar och barnadödlighet i inledande afrikanska pilotprogram.



WALL-Y | 1 min read Kiktigt stora drönare banar väg

för långa godstransporter MightyFly får FAA-godkännande för en autonom eVTOL-transportdrönare. Drönaren kan bära 45 kilo last upp till 100 mil. Räckvidden och att den kan operera utom synhåll från operatören möjliggör långa transportsträckor.



WALL-Y | 1 min read O Blodtyper kan bli ömsesidigt kompatibla

Forskare har utvecklat en metod med enzymer från tarmbakterier för att omvandla blodtyperna A och B till universell donatorblodtyp O. Framstegen öppnar för möjligheten att alla blodtyper kan bli universella donatorer



🔹 Det globala stödet för demokrati är rekordhögt – 85%

85 procent av människor globalt anser att demokrati är viktigt i deras land. Den högsta siffran som uppmätt

hittills.



Mathias Sundin | 4 min read

🚔 Är ditt jobb hotat av AI? Så här bör du INTE agera då

Kan AI göra saker som ingår i ditt jobb? Bör du då kämpa mot och försöka stoppa den sortens AI? Den åsikten framförs nu. Istället finns nu en stor chans att levla upp dig själv med hjälp av just AI. Det kommer vara mycket mer framgångsrikt.



WALL-Y | I min read

Rekord: 6G som är 500 gånger snabbare än genomsnittlig 5G

Forskare i Japan har uppnått

dataöverföringshastigheter på 100 gigabit per sekund, vilket är upp till 500 gånger snabbare än genomsnittlig 5G-hastighet. Tekniken förväntas möjliggöra nya applikationer som holografisk kommunikation och förbättrade VR-upplevelser.



WALL-Y | 2 min read

🐜 Hej igen! Voyager 1 börja sända till jorden efter fem månaders tystnad

Voyager 1 är mänsklighetens mest avlägsna farkost, nu cirka 24 miljarder kilometer från jorden. NASA:s ingenjörer lyckades åtgärda ett kommunikationsfel med hjälp av kreativa lösningar. Den första datan som mottogs visar att Voyager 1 är i gott skick och fungerar som den ska.

Mathias Sundin | 5 min read

🔹 Rekordstöd för demokrati, men folk är besvikna på regeringarna. Varför och vad gör vi åt det?

Nästan 9 av 10 vill ha demokrati. Men långt många färre är nöjda med den demokrati de lever i. Det bygger på att det demokratiska system vi har är över 100 år gammalt och behöver uppdateras.



Mathias Sundin | 3 min read Warp News #223

🍽 Hej igen! Voyager 1 börja sända till jorden efter fem månaders tystnad. 🖨 40% av minskningen i barnadödligheten är tack vare vacciner. 🗳 Det globala stödet för demokrati är rekordhögt - 85%. 6G som är 500 gånger snabbare än genomsnittlig 5G.



2









6,266 Retweets 10.4K Likes









The next Trilion

dollar question

History: Telefonföreningar (214 local cluster)









Jonas Birgersson på toppmöte med Clinton och Gates



Sveriges bredbandsapostel Jonas Birgersson, USA:s president Bill Clinton och Microsofts Bill Gates finns med bland de 2000 delegaterna vid ekonomiska toppmötet i Davos. Svenske IT-gurun Jonas Birgersson ska deltaga i ekonomitoppmötet i schweiziska skidorten Davos, som börjar i dag.

Han är i fint sällskap. Bill Clinton, Tony Blair, Bill Gates, och Percy Barnevik ska också dit.

Jonas Birgersson, sveriges egen bredbandsprofet, ska deltaga i ekonomimötet i Davos.





Moore's Law

['morz- 'lo]

An observation that the number of transistors on a microchip roughly doubles every two years, whereas its cost is halved over that same timeframe.

Investopedia





Our actions have impact





















Think you can design and build the greatest amusement park in the world? You select the site, you layout the rides. In fact, you control every aspect of running a profitable amusement park; from hiring employees, to developing new rides, to maintaining an adequate supply of soft drinks. Any mistakes, and the bustling hordes of fun-seekers will let you know. Oh, and that Merry-Go-Round in flames is a clue too.

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 <u>Safety and satisfaction</u>. Stellar support 24/7 and full refunds up to 30 days.

Time to beat

Demis Hassabis

Background

AlphaFold is an AI system developed by Google DeepMind that predicts a protein's 3D structure from its amino acid sequence. It regularly achieves accuracy competitive with experiment.

Google DeepMind and EMBL's European Bioinformatics Institute (EMBL-EBI) have partnered to create AlphaFold DB to make these predictions freely available to the scientific community. The latest database release contains over 200 million entries, providing broad coverage of UniProt (the standard repository of protein sequences and annotations). We provide individual downloads for the human proteome and for the proteomes of 47 other key organisms important in research and global health. We also provide a download for the manually curated subset of UniProt (Swiss-Prot).



Q8I3H7: May protect the malaria parasite against attack by the immune system. Mean pLDDT 85.57.

View protein





The Future is NOW



low fixed

COSt for

green energy

Moore's Law

['morz- 'lo]

An observation that the number of transistors on a microchip roughly doubles every two years, whereas its cost is halved over that same timeframe.

Investopedia

Cleantech costs will continue to fall

Solar, the cheapest energy source in history, will halve in price by the end of the decade



RMI Source: BNEF, RMI analyses.

Pessimists sound clever; optimists change the world

The incumbents have been predicting the end of the transition for decades

Pessimist's and optimist's take on solar and wind uptake



Source: Ember.

\downarrow HERE COMES THE SUN the past and a possible future



Peak in electricity

Solar and wind alone supplied 500 out of 600 TWh of demand growth in 2023 and will break through the average this year





China's astronauts are aiming to land on the moon by 2030. They now have a new spacesuit to do it



UK becomes the first major economy to stop burning coal for electricity, closing its last power plant





The Economist

Technology Quarterly | The ultimate supply chains

The electric grid is about to be transformed

The technological and regulatory requirements will be immense, writes Hal Hodson

Sveriges befintliga, ålderstigna elnät kräver betydande investeringar, runt 890–945 miljarder kronor mellan 2021 och 2045, för låg- respektive högscenario. Investeringarna syftar framför allt till att möta den kraftigt ökande elanvändningen, men också att upprätthålla den nuvarande servicenivån. En stor del av investeringen – 587 miljarder - består av så kallade reinvesteringar som kommer behöva göras oavsett framtidsscenario. Omfattningen av nyinvesteringarna beror på produktions- och konsumtionsscenario och beräknas till 302 och 358 miljarder kronor i scenario låg respektive hög för perioden fram till 2045, varav merparten inom transmissionsnätet.

The Big Problem With the Modern Electricity Grid

Bloomberg

internetification

of the energy system

Why Neighbourhood Energy Sharing Network

Resilient No Single Point of Failure

Unlock Unlimited Local Power Generation

New Investment Sources (85% private)

with **zero negative impact** on trad. grid.

New Energy System

the firewall principal

Local

Rules

Global

New Energy System 10.0.0.1 10.0.0.2

the firewall principal

74.125.193.138

New Energy System

the firewall principal

74.125.193.138

New Energy System single building (stand-alone)

New Energy System neighbourhood (EC + Grid)

HVIL on High Voltage Connector

Operations the energy protocol

02 The Energy Protocol (EP)

Inspired by the Internet architecture distributed and independent networks that can function as standalone but will benefit greatly from being interconnected with as many compatible networks as possible. EP will include similar concept to peering & routing but for Energy Sharing. In short, the language needed to enable the "Internetification" of energy distribution.

Standing on the shoulders of giants.

A Protocol for Packet Network Intercommunication

VINTON G. CERF AND ROBERT E. KAHN, MEMBER, IEEE

Abstract — A protocol that supports the sharing of resources that exist in different packet switching networks is presented. The protocol provides for variation in individual network packet sizes, transmission failures, sequencing, flow control, end-to-end error checking, and the creation and destruction of logical process-to-process connections. Some implementation issues are considered, and problems such as internetwork routing, actoruting, and timeouts are exposed.

INTRODUCTION

IN THE LAST few years considerable effort has been expended on the design and implementation of packet switching networks [1]-[7],[14],[17]. A principle reason for developing such networks has been to facilitate the sharing of computer resources. A packet communication network includes a transportation mechanism for delivering data between computers or between computers and terminals. To make the data meaningful, computer and terminals share a common protocol (i.e., a set of agreed upon of one or more packet switches, and a collection of communication media that interconnect the packet switches. Within each HOST, we assume that there exist processes which must communicate with processes in their own or other HOSTS. Any current definition of a process will be adequate for our purposes [13]. These processes are generally the ultimate source and destination of data in the network. Typically, within an individual network, there exists a protocol for communication between any source and destination process. Only the source and destination processes require knowledge of this convention for communication to take place. Processes in two distinct networks would ordinarily use different protocols for this purpose. The ensemble of packet switches and communication media is called the packet switching subnet. Fig. 1 illustrates these ideas.

Fig. 1. Typical packet switching network.

Arrange Brikks

8

Energy Storage

Home

STORAGE CAPACITY 100 KWH

Neighbourhood

Society

Sustainability

1125 - 20

Smarness

Store

This is your current battery capacity, we recommend that you never go below 90% of your total capacity out of safety concern.

Please choose the amount of your storage you would like to offer to the to the balance provider, as you move the slider you can see how your compensation changes.

SUPPLIERS	Supplier Info	Yearly Revenue	Startup bonus	Termination	
∕ØCheck Watt	DEAL!	150.000 kr	75.000 kr	24 month(s)	
	0	125.000 kr	25.000 kr	12 month(s)	S
e.on	8	90.000 kr	0 kr	24 month(s)	
🕲 kraftringen	0	100.000 kr	9000 kr	3 month(s)	
Jämtkraft	0	95.000 kr	25.000 kr	12 month(s)	
🗳 tibber	DEAL!	165.000 kr	Easee Charger Value 14.500 kr	12 month(s)	
	0	130.000 kr	25.000 kr	6 month(s)	
Enkla Elbolaget	0	113.500	14900 kr	12 month(s)	
verview 🗸	Options 📿	Checkout 📿			Next Step

Climate-neutral and smart cities through the Climate City Contract

EU CITIES

112 cities 2030 & 2050 Primary partners

System demonstrators for climate-neutral cities

Aiming to create a 'new normal' in critical areas to accelerate the transition to climate neutrality, by utilizing the content of the climate city contract in practice

System demonstrator portfolio

00 \bigcirc Lund **Bristol** Bogotá \bigcirc Makindye_ Ssabagabo \bigcirc Curitiba Zero-emission mobility *System demonstrators and system pilots in planning phase Affordable climate-neutral neighborhoods

Stockholm

WORLD URBAN

FORUM

WORLD URBAN FORUM

The premier global conference on sustainable urbanization

4-8 November 2024, Cairo, Egypt

See you in

Registration

Explore WUF12

Climate Neutral Cities

Energy Communities as core for green transition

Citizens empowered by an Internet architecture inspired way of working together with local resources and decisions can share and support each other with out giving up on freedom and independence. New neutral infrastructure can be built to solve local challenges but at the same time help solve global problems.

Open standards and Local marketplaces, supported by innovative financing, policy and procurement through shared best practices, can empower cities to solve even the hardest challenges, one neighborhood at a time.

Opportunities for new social sustainability is created by local eco-system for independent service providers that create new jobs and offer solutions products to all the connected Energy Communities. Then system-Integrators and innovative solution expert can share and spread the concept to any city in need of climate transition to reach climate neutrality.

Stage 3 – Finalize DC based energy network

Replace grid-tied AC inverters with DC based devices to complete the energy network. Includes functionality to export surplus energy to utility grid.

PV Array PV Array Pvlontech Pylontech 250kWp 57kWp Powercube #2 Powercube #1 (H1-48/480) (H1-48/480) **Devices added** 24kWh 24kWh 480V (435-540V) 480V (435-540V) 25A (12kW) 25A (12kW) can supply power of u can supply power of up will keep track of the A to 250kW from the PV to 62,5kW from the PV trings that used to serv trings that used to serve ide and keep the facility I can talk with the the hybrid inverters the grid-tied inverter AC grid running if utility Master BMS and car and the grid-tied ones grid is not available previously is/charge at up to 50kW MBMS1000 (new) Facility AC (Ctrl + DC/D0 4S: Pylontech Grid Hi there LKP! ontrol the energy flo Hello LKF! I can also work with Utility Grid between connected can work with 200-200-1000V and will for Connection evices and manage th 000V and will for nov now mostly demand at 50kW DC backplane of ~750 mostly supply ~750V. can talk with the batter nd can dis/charge at up to 150kW Facility AC ENERGY ROUTER EV Slow Charging (Ctrl + 3x DC/D + Firewall) (Ctrl + 3x DC/DC BMS: VolvoBMS Grid System 16x 3.7kW) Meter will keep track of the AC ide and keen the facility (1 phase 16A) AC grid running if utility grid is not available Utility Grid (load balancing?) Connection 250kW <mark>???</mark> kWh 600V <mark>?</mark> 250A <mark>?</mark> (150kW ĻŔĘ LKP

1x PV Gateway 62,5kW

2

3x 62,5kW MPPT Converter (to existing PV Gateway)

+ Support for energy export to AC grid

To match original AC grid export capacity, additional gateways would be required...

Energy Sharing in Lund

Once proven, **locally shared**

energy enable a

new energy society

TACK!

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