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> *"Just as our bodies convert the chemical energy of food into heat and mechanical energy,*
> *as solar panels convert the sun's electromagnetic energy into electricity,*
> *data centres convert electrical energy to compute and it powers the digital economy"*

Prof Scott Galloway, Big Energy, 11 May 2024

AI continues to dominate the industry.

March was a landmark month for AI as **Nvidia**, a leading influencer in the market, unveiled a series of ground-breaking products and solutions at the Nvidia GTC (GPU Technology Conference). With over 200,000 registrations, 20,000 live attendees, and 27 million replay viewers, GTC has solidified its status as a crucial event in the global tech calendar.

However, the sheer volume of content can be overwhelming. To save you time, we've condensed the event's highlights into two key visuals, offering a quick yet comprehensive overview.

It's been intriguing to observe the stock performance of **Trump Media Technology Group** (TMTG) over the past few months. Initially valued at nearly US$10 billion, TMTG's stock surged by over 45% at its Nasdaq debut. However, with 8.9 million sign-ups, US$58 million in losses, and US$4.1 million in revenues, it pales in comparison to its rival, X (formerly Twitter), which boasts a market capitalisation of approximately US$41.09 billion and 245 million daily active users.

This month, Australia's Federal Court sided with **Musk's social media platform X** over the country's digital regulator. It refused to extend a temporary court order for it to hide videos of a Sydney church stabbing in April, which was caught on a live stream and declared a terrorist attack by the government. LINK

Musk mocked the eSafety Commissioner as the "Australian Censorship Commissar" and argued that allowing any country to censor global content sets a dangerous precedent of controlling the entire internet. The Prime Minister criticised Musk's "arrogance" and lack of "common decency."

While X complied with the temporary injunction, the case highlighted challenges in enforcing local laws on global platforms and differing perspectives on regulating harmful online content versus protecting free speech internationally. Especially if you have kids, who really won?

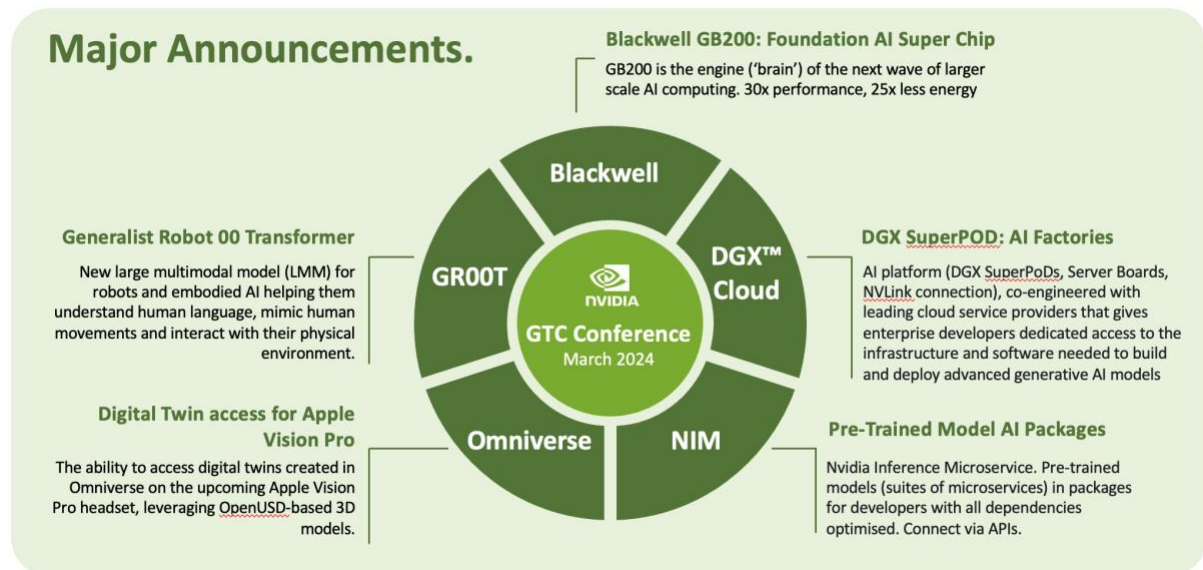*Previous Newsletters, including this one, are available on our site in pdf HERE*

CONTENTS:

Nvidia GTC 2024 - Summary and Insights

"TSMC is to chip factories as Nvidia is to AI factories"

Nvidia, which controls over 70% of AI chip sales and dominates in training generative AI models, held its largest GTC yet. CEO Jensen Huang, in his signature black leather jacket, captivated audiences with nearly two hours of exciting announcements and visionary insights. LINK

The first diagram below illustrates the major announcements.

A non-exhaustive summary of the major GTC announcements.

Blackwell: The Blackwell GB200 AI 'super chip' is Nvidia's next big leap, offering four times the training performance, 30 times the inference performance and up to 25 times better energy efficiency of its predecessor, Hopper H100. This chip is set to power the next generation of DGX Server Boards and SuperPODS, forming the backbone of Nvidia's 'AI Factories'.
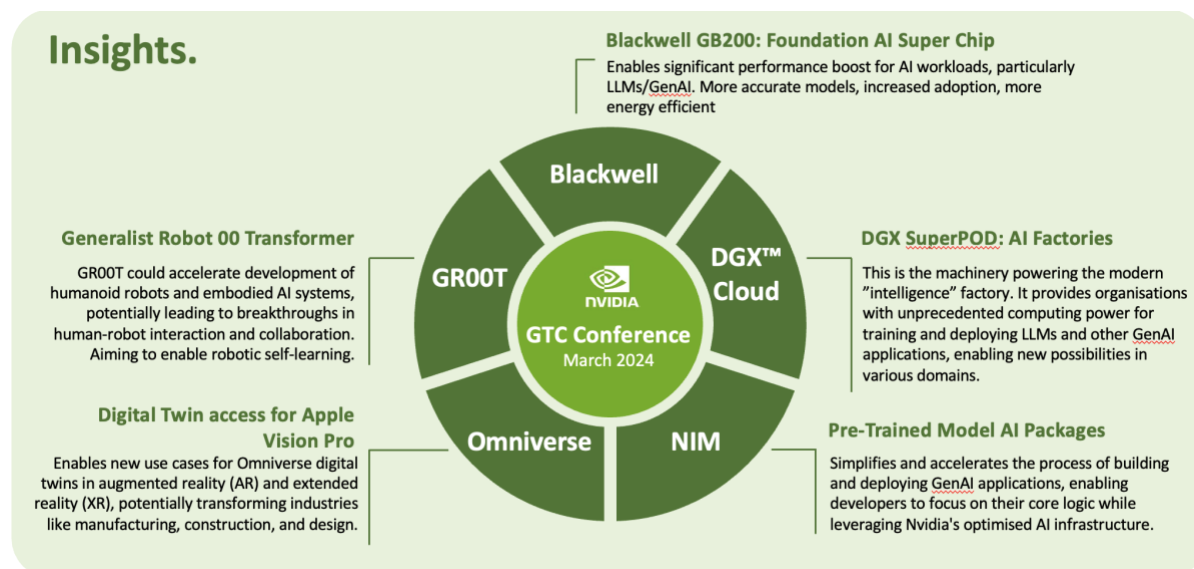
Nvidia Inference Microservices (NIMs): These packages integrate various hardware and software components, simplifying AI application development and accelerating deployment.

Digital Twins: Huang referenced "Digital Twins" (DT) throughout the presentation. His most meaningful example outlined how digital twins could revolutionise weather prediction, potentially saving thousands of lives and billions of dollars by improving accuracy and efficiency.

Robotics: Nvidia is pushing the boundaries of robotics with its GR00T (Generalist Robot 00 Technology) initiative, introducing new capabilities in AI hardware and software integration. Several examples were provided on the enormous benefits to humans in terms of what AI through robots can enable in the physical world. Several robotics components were announced including a new large multi-modal model (LMM) platform, Thor, a new system-on-a-chip (SoC) based on Blackwell architecture, Isaac robotic platform updates including new learning, orchestration, dexterity and multi-sensor 3D vision capabilities.

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Implications of the Announcements

The second diagram below provides insights into the potential impact of these announcements on the industry.

GTC announcements - Insights

Internet usage – intriguing data and insights

A recent Sandvine report highlights interesting trends in internet usage LINK. While video continues to dominate traffic demand, there are notable differences between fixed and mobile networks:

Video Traffic: Fixed networks carry approximately 10 times more video traffic per user compared to mobile networks (5.7 GB vs. 493 MB per day).
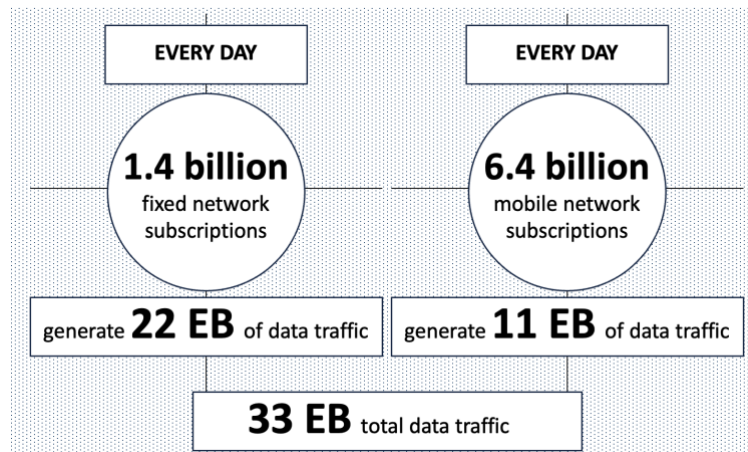
Top Platforms: YouTube leads in both categories, generating substantial traffic over both fixed and mobile networks – 16% and 21% respectively.

Top Apps by Downstream Volume – Fixed				Top Apps by Downstream Volume – Mobile			
	Downstream Volume				Downstream Volume		
	Application	% DS Vol	Sub. Volume		Application	% DS Vol	Sub. Volume
1	YouTube	16%	1.9 GB	1	YouTube	21%	233 MB
2	Netflix	12%	1.4 GB	2	Facebook	18%	199 MB
3	Facebook	9%	1.0 GB	3	Tik Tok	15%	175 MB
4	Tik Tok	7%	859 MB	4	Instagram	7%	82 MB
5	Operator Content	7%	850 MB	5	Snapchat	7%	76 MB
6	Amazon Prime	6%	722 MB	6	Netflix	6%	73 MB
7	Disney+	5%	610 MB	7	Disney+	2%	25 MB
8	Xbox Live	5%	573 MB	8	WhatsApp	2%	24 MB
9	Instagram	3%	370 MB	9	Telegram	1%	15 MB
10	Snapchat	2%	231 MB	10	X (Twitter)	1%	14 MB

Downstream volume by application for Fixed and Mobile

Traffic Volume Insights:
- Fixed networks generate twice the traffic of mobile networks despite having fewer subscriptions.
- The combined traffic from both networks totals 33 Exabytes (33 x 10^{18} bytes) per day, driven primarily by digital super-giants like Meta, Apple, Microsoft, Amazon, Alphabet, Netflix, TikTok, and Disney+.
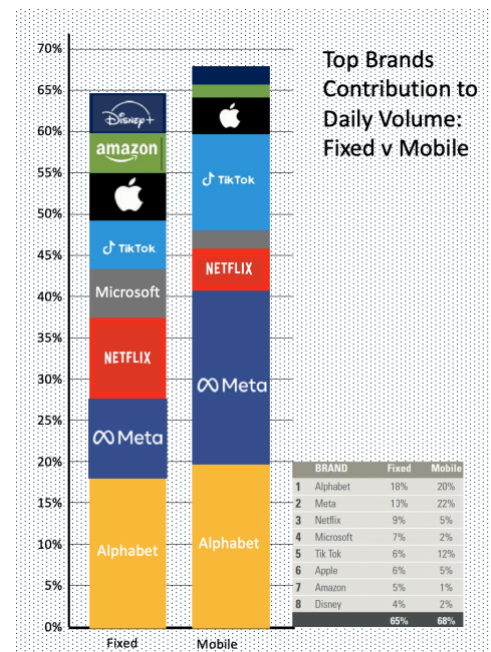

Fixed + Mobile generate 33 Exabytes (10^{18} bytes) per day in total

Top Brands: Meta, Apple, Microsoft, Amazon, Alphabet, and Netflix (MAMAAN), plus TikTok and Disney+, are the digital "super-giants" in terms of application volumes, accounting for 65% of total internet volume – see graph on right.

Social Media: is the biggest App Category in Mobile networks' downstream traffic, with 35%, and 7 of the top 10 apps attributable to Facebook, TikTok, Instagram, Snapchat, WhatsApp, Telegram, and X.

Upstream: Social Media is also the largest contributor to upstream traffic on Mobile, due in large part to the sharing and posting of videos on apps like TikTok and Facebook Messenger.

Top Brands Contribution to Daily Volume: Fixed v Mobile

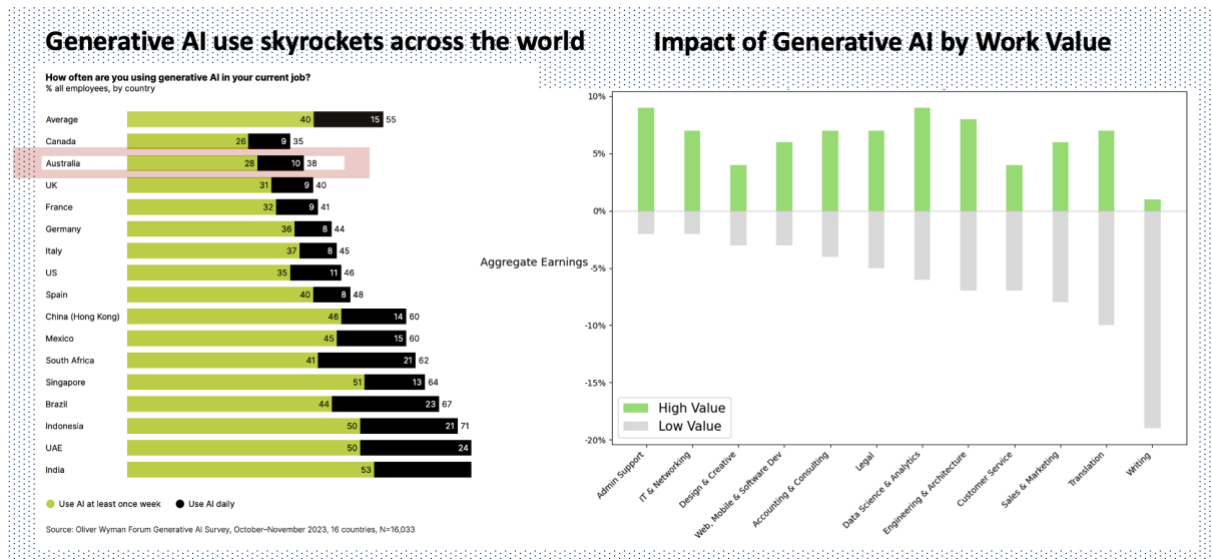| BRAND		Fixed	Mobile
1	Alphabet	18%	20%
2	Meta	13%	22%
3	Netflix	9%	5%
4	Microsoft	7%	2%
5	Tik Tok	6%	12%
6	Apple	6%	5%
7	Amazon	5%	1%
8	Disney	4%	2%
		65%	68%

The data underscores the extraordinary and critical dependency between Over the Top (OTT) players and telecom operators. It also underscores the differences – one incurs massive costs building telecommunications infrastructure, the other rides over it for free.

It is difficult to see how this situation is sustainable.

Snapshot - Global Generative AI Usage

How quickly has Australia adopted GenAI relative to other countries? The graph on the left shows Australia ranked as 15th biggest adopter. Top of the leader board are India and the UAE.

Which jobs are being most impacted by GenAI? On the right-hand graph, 'Writing' is shown being most negatively impacted while 'Admin Support' is currently the biggest beneficiary.

Generative AI use skyrockets across the world

How often are you using generative AI in your current job?
% all employees, by country

Country	Use AI at least once week	Use AI daily	Total
Average	40	15	55
Canada	26	9	35
Australia	28	10	38
UK	31	9	40
France	32	9	41
Germany	36	8	44
Italy	37	8	45
US	35	11	46
Spain	40	8	48
China (Hong Kong)	46	14	60
Mexico	45	15	60
South Africa	41	21	62
Singapore	51	13	64
Brazil	44	23	67
Indonesia	50	21	71
UAE	50	24	
India	53		

Source: Oliver Wyman Forum Generative AI Survey, October–November 2023, 16 countries, N=16,033

Impact of Generative AI by Work Value

Maths – Multiplication Trick

5 x 9 = 45 ✓   44 x 99 = 4356 ✓   523 x 999 = 522447 ✓   ➡   8724 x 9999 = ?

-1 -4   -1 -43   -1 -522
_____   _____   _____
 4   5   43   56   522   477

Stay connected.

Kevin