



VIDYAVARDHINI'S
COLLEGE OF
ENGINEERING AND
TECHNOLOGY



BYTE

॥ सर्वं ज्ञानं मयि विद्यते ॥ DEPARTMENT OF COMPUTER ENGINEERING

THE TECHNICAL NEWSLETTER OF
COMPUTER ENGINEERING DEPARTMENT.

DISCLAIMER: All information provided in this newsletter is for educational and informative purposes only, 'Vidyavardhini's College of Engineering and Technology' is not responsible for any action or consequences, direct or indirect, arising from the use of this e-magazine, For formal circulation only. NOT FOR SALE.

STAFF INCHARGE: MR. VIKRANT AGASKAR
EDITORS: MR. ANIRUDH KODIAL
MR. CHINAR VARTAK
MR. NILAY NAIK

GOOGLE IS ADDING NEW HOMESCHOOLING FEATURES TO ASSISTANT SMART DISPLAYS AND SPEAKERS

Google is expanding the capabilities of its Assistant on smart displays and speakers today to make it easier for families that are homeschooling their children during the pandemic.

Leading the way is the new Family Bell feature, an alarm-like reminder that can be broadcast from a Nest Home smart display or speaker at a set time. Google is pitching the Family Bell as a way for families to announce when it's time to start schooling or get ready for bed. A parent can program a Family Bell through the Assistant app on a phone, set when it will go off and repeat on specific days, and choose which smart display or smart speaker it will chime from. Family Bell alerts can also be programmed through Hey Google voice commands, but any management after that has to be done through the Assistant app.

When the Family Bell alert goes off, the Nest device will emit a chime and recite whatever is programmed in the app. You can program multiple Family Bells for the same time, but you can only have each Bell broadcast from a single smart display or speaker.

Another new feature aimed around homeschooling kids is the ability to have a

Nest smart display or speaker announce when it's time to start the school day and show education themed graphics. You can say "Hey Google, school's in session" or "Start the school day," and the special visuals will play. It's also possible to program smart home devices, such as lights, to react when the command is issued. Lilian Rincon, senior director of product management for Google Assistant, likens this to an old-school class bell – but at home.



Google is also expanding the Broadcast feature, which allows you to blast a custom alert to all of the Nest speakers in your home. Now, you can specify which speakers or smart displays a Broadcast goes to, and that should prevent disturbing a sleeping child from the announcement.

Finally, Nest smart displays and speakers are getting an animal of the day feature, which will provide facts, sounds, and a creative task, such as drawing, for a different animal each day. You can hear about the animal of the day by saying "Hey Google, tell me about the animal of the day" to a Nest smart display or speaker.

All these new features are rolling out to Nest Hub smart displays and Nest Home speakers starting today.

©Dan Seifert, The Verge

MACBOOK PRO BATTERY PROBLEMS CONFIRMED BY APPLE

MacBooks have been showing 'not charging' even though the power adaptor is plugged in and the internal battery is not fully charged. This rightly leads them to question what is going on and what has broken on their laptop?

Turns out that nothing is broken, everything electrical is working as intended. Apple has posted a new support document on the issue, explaining that the change in charging status is party of the updated Battery Health Management software in MacOS

Catalina:

"When battery health management is turned on, you might occasionally see "Not Charging" in the battery status menu of your Mac, and your battery's maximum charge level might be lowered temporarily. This is normal, and it's how battery health management optimizes charging. Your Mac resumes charging to 100 percent depending on your usage."

This approach to charging is designed to extend the life of your MacBook's battery. It won't make it last forever, but it will give you more time with your first battery before you have to approach Apple for a replacement.

What I find disappointing is what lies behind this problem. Apple is famed for focusing on the small details; getting pixels in the right position, rehearsing the unboxing experience, ensuring a consistent look, and guiding users to the right feature or function through the UI.

The failure here is not a failure of the battery, or the charging circuitry, it is a failing of Apple's user interface.

Subsequent paragraphs in the support document make it clear why there is confusion around charging under the new system:



"You might also see "Not Charging" when your Mac isn't getting enough power to charge the battery, such as when it's not using the correct power adapter and cable, or it's plugged into a power source that isn't delivering enough power."

In essence you can get the message "not charging" while you are charging, "not charging" while you are not charging, and "not charging" when you have an issue with the charging hardware. Three different scenarios, all of which offer important feedback to the user, and one single text string.

Given the prominence that the Battery Health software has received from Apple, I'm surprised that this slipped through the attention to detail net. Still, there's a really easy fix for this. I hope Apple decides on some different phrases for two of those statuses. "There is a charging problem" and "Charging Paused" would be good starting points.

©Ewan Spence, Senior Contributor, Forbes magazine

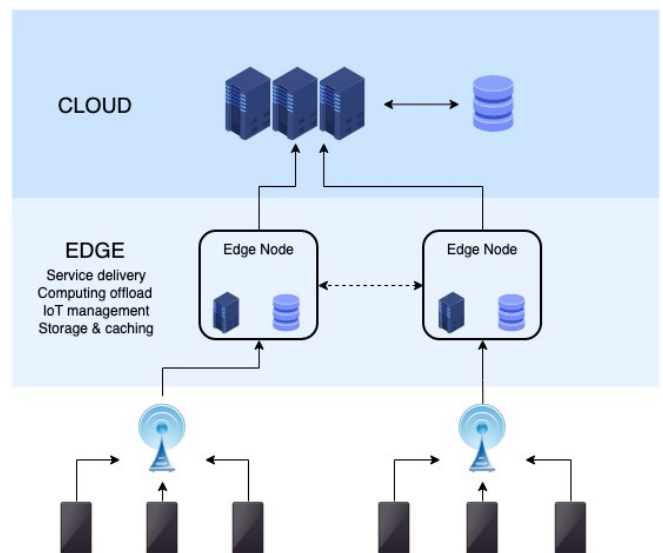
THE NEW EDGE IN EDGE COMPUTING

It was not that long ago when with servers in our offices, we all had edge computing. Of course, we didn't think of it that way. It was just what worked. Then, along came the cloud, and everything changed. Computers were hundreds of miles and milliseconds away. For our office applications, that level of latency's

OK. But with the rise of the Internet of Things (IoT), 5G, and our never satisfied need for speed, a new kind of local computing, edge computing, is appearing.

And it is not just showing up as another technology du jour. Arpit Joshipura, The Linux Foundation's general manager of networking, predicts, "edge computing will overtake cloud computing" by 2025.

IBM Services Global CTO and Vice President Bridget Karlin won't go quite as far as Joshipura, but she believes, "We will see an increase in Edge computing due to the sheer quantity of instances compared to centralized cloud centers. IBM estimates that there are some 15 billion intelligent devices in the market today, and IDC forecasts that by 2025 that will grow to 150 billion -- resulting in unprecedented volumes of data."



Lewis Carr, senior director of product marketing and management for Actian, a cloud data management company, can also see edge computing dominating. Carr thinks the "edge will overtake cloud in terms of sheer horsepower, data collected, and even number of cycles on data processing and analytics operations applied to that data locally at the

edge -- provided we take the edge to mean end-to-end across the various tiers of the edge."

©Steven J. Vaughn-Nichols, Insider Pro

SPACEX STARSHIP PROTOTYPE TAKES BIG STEP TOWARD MARS WITH FIRST TINY 'HOP'

The company performed an almost 500foot (150 meter) "hop" of its SN5 Starship prototype at its Boca Chica development facility at 5 p.m. PT.

The nearly nine-story-tall test craft ignited its single Raptor engine and slowly rose into the air before gently returning to the ground and landing upright not far from where it took off.

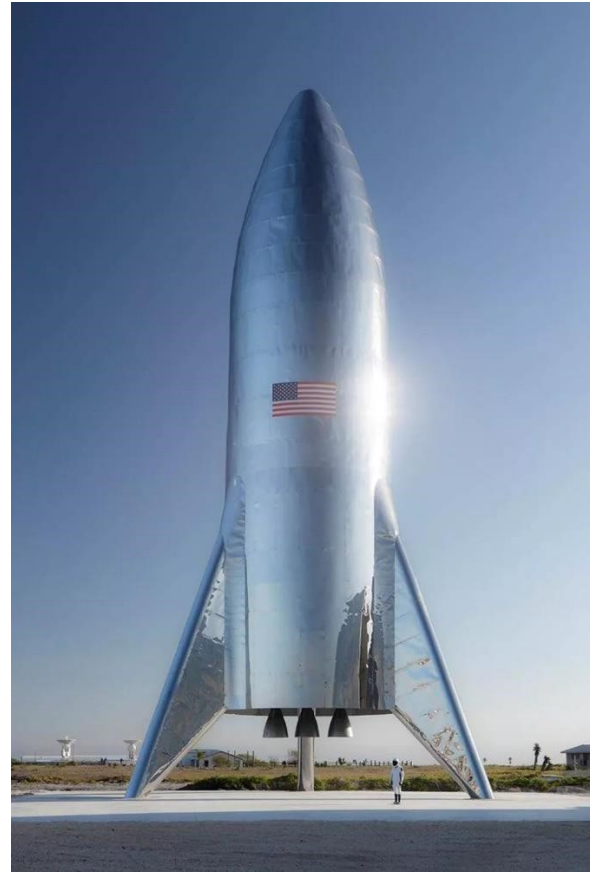
For a moment after the engine ignited, it looked as if SN5 was struggling to get airborne, but then it rose above its own smoke, hovered and came in for a soft landing. It traveled just a tiny fraction of the more than 35 million miles Musk hopes the final Starship will traverse to take humans to Mars.

The long-awaited low-altitude test flight comes after a handful of previous prototypes failed without ever leaving the ground, mostly during pressurization tests.

SN5 is designed to be able to perform an orbital flight, but before pushing toward space, it first had to complete this comparatively tiny hop.

The roughly 98-foot-tall (30 meter) vehicle is a stripped-down version of what the final Starship spacecraft will look like, without the nose cone or fins. It's 30 feet wide, and it's basically a fuel tank and a single Raptor

engine topped with a weight that simulates a payload. The resulting shape is something like a thermos many will recognize.



©Eric Mack, C|net

WORD SEARCH PUZZLE

Q	Q	T	X	T	U	R	I	N	G	S	D
T	E	N	S	O	R	P	Z	B	K	F	R
E	J	I	S	C	U	A	O	P	T	V	Q
Q	F	Y	I	W	A	S	A	N	T	Y	B
G	Y	V	V	B	Q	C	T	O	W	Z	I
C	E	C	T	E	R	A	F	L	O	P	T
H	B	G	V	M	D	L	X	A	G	I	J
D	M	C	B	Q	I	N	Q	V	O	H	S

ARTICLES SUBMITTED BY:

- NILAY P. NAIK
- CHINAR R. VARTAK
- ANIRUDH P. KODIAL

Do share your views, feedback and articles by mailing at bytemagvcet@gmail.com