

PORTERVILLE.COM
PORTERVILLE ONLINE
PORTERVILLE WIRELESS

OCSNET.NET
OACYS.COM



OLSON
COMPUTER
SERVICES

NETWORKING THE
COMMUNITY
SINCE 1982

N E W S L E T T E R A U G U S T 2 0 1 3
VISIT OUR WEBSITE FOR CURRENT NEWSLETTERS, NEWSLETTER ARCHIVES, OR TO REQUEST NEWSLETTERS VIA EMAIL

The end of Moore's Law

What will it mean for consumers?

Way back in 1965, Intel co-founder Gordon Moore famously predicted that the power of microprocessors would double every 18 to 24 months without adding to size or cost.

That prediction has held true for more than 40 years, but manufacturers are finally falling behind. Between 2009 and 2012, Intel improved the performance of its CPUs by only 10 or 20 percent per year—way behind the 60-percent-per-year gains needed to keep pace with Moore's original forecast.

"The giant machines that researchers use for massive simulations aren't going to keep getting faster at the same rate they have in the past" according to Peter Kogge, an ex-IBM computer scientist who now teaches at Notre Dame and who led a study group on the question for DARPA, the U.S. Defense Advanced Research Projects Agency (*who truly did invent the Internet*).

The basic reason: pushing microprocessors to work a lot faster than they already do will require inordinate amounts of power, and generate an unmanageable amount of waste heat.

"You could build a computer that runs 100 times faster than a Cray, but you'd need a good-sized nuclear power plant next door," not to mention a huge, dedicated cooling system, Kogge observed.

Author Wade Roush of Xconomy San Francisco asks, "...if the single most powerful technology trend of the last half-century—the one driving all sorts of other exponential advances, in fields from telecommunications to robotics to genomics—has reached its endpoint, what would that really mean from an average consumer's point of view?"

Not much he says, although "we'll probably have to wait longer between big upgrades. One might even argue that a pause on the hardware side would allow software engineers to optimize promising ideas that are still emerging today, rather than having to spend so much time rewriting their applications for new platforms and devices.

"There are important frontiers where computer scientists can make progress without having to wait for transistors to get even smaller—and where a few breakthroughs could be extremely meaningful to consumers, such as in artificial intelligence, cloud computing, and interface design."

On the subject of cloud computing, Roush states that

Continued on Page Two

Predictions for the next 110 years

Popular Mechanics takes a stab at this

Yes, PM actually makes 110 predictions for the next 110 years! That strikes us as a bit ambitious, but here are a few that seem reasonable, in the order they appear in the full article.

- **People will be fluent in every language.** With DARPA and Google racing to perfect instant translation, it won't be long until your cellphone speaks Swahili on your behalf.
- **Climate-controlled clothing for extreme weather.** "Peltier plates" can be used to warm you up or cool you down by sending an electric current across the junction between two different metals.
- **Chemotherapy will be far more effective.** By delivering tiny nanoparticle doses of treatment drugs right to cancerous

Continued on Page Two

Work from home!

OCS can connect your home to your office or tie multiple offices together at high speed and with full VPN security, anywhere in the Valley or beyond...



The OCS home page has received over 17 million hits – contact us for local advertising information!

OCS service plans are described at www.porterville.com

Internet Plans and Pricing

Call about eCommerce!

Need qualified computer or network maintenance? Give us a call!



Our Military Men & Women
AMERICASUPPORTSYOU.MIL

THE NATIONWIDE OCS REFERRAL PROGRAM

If you refer a friend, family, or business associate to OCS, tell them to mention your name and you'll receive up to a month of free service! **Our subscribers have earned \$68,513 so far** – click Referrals on our home page for details! Your friends may simply click *Subscribe* to apply for service online.



**861 MILLION VIRUSES, SPAM, AND PHISHING ATTEMPTS
HAVE BEEN STOPPED BY THE OCS CENTRAL SYSTEM
CALL US ABOUT OCS OFFICE SCAN!**

OFFICE HOURS WEEKDAYS 8-5 • SATURDAYS 9-5 • CLOSED SUNDAY
767 NORTH PORTER ROAD • PORTERVILLE CA 93257 • 559-781-4123

The end of Moore's Law

Continued from Page One

everything is gradually moving to the cloud and it's easy to just keep adding servers to data centers.

But while that may be true, he also very correctly adds that "In a cloud-centric world, the limiting factor will be network bandwidth—**especially wireless bandwidth** (our emphasis added)—rather than chip speeds."

Is Moore's Law really over, or is it just taking a breather? In the end, Roush says it doesn't really matter. "We should know by now that innovation proceeds in fits and starts, and that it's always intertwined with political and economic developments.

"Given the right incentives, computer researchers will eventually perfect a new medium that will get the party going again, supporting another several decades of exponential advances in processor speed. Maybe it will be proteins or other molecules; maybe it will be qubits (quantum-entangled particles).

"But whatever it is, it won't be ready before Moore's Law peters out on silicon-based devices. Engineers should use the interim to work on better consumer software, which isn't nearly as cool as it could be, or should be."

Source: www.xconomy.com/national/2013/07/26/what-will-the-end-of-moores-law-mean-for-consumers-not-much

Fan Mail



"Just a quick note to say that I've enjoyed reading your last couple newsletters, especially the feedback on the experience with Windows 8 and the Windows Surface Pro." -BE

Predictions for the Next 10 years

Continued from Page One

cells, the mini messengers will significantly reduce the pain and side effects of today's treatments.

• **Electric cars will roam (some) highways.** Interstate 5 from California to Washington will be lined with fast-charging stations, and east-to-west interstates will follow.

• **Digital "ants" will protect the power grid.** Programmed to wander networks in search of threats, the high-tech sleuths in this software leave behind a digital trail. When a digital ant designed to perform a task spots a problem, others rush to the location to do their own analysis. If operators see a swarm, they know there's trouble.

• **Cars will be connected.** They will communicate with traffic lights to improve traffic flow, and interact with other vehicles to prevent accidents.

• **Smart homes will itemize utility bills.** Low-cost sensors can monitor electrical variations in power lines to detect each fixture and appliance's signature, as well as pressure changes to do the same for gas lines and water pipes.

• **Contact lenses will grant Terminator vision.** Superhuman eyesight will be as simple as placing a soft lens on your eye. Circuits and antennas can also be grafted onto flexible polymer, enabling zooming, night vision, and visible data.

• **Your body will be connected.** Doctors will check your vital signs around the clock via tiny sensors, and spinal cord implants will reverse paralysis.

Source: www.popularmechanics.com/technology/engineering/news/110-predictions-for-the-next-110-years

OACYS WIRELESS INTERNET SERVICE PLANS

Wireless Plan Types	Average Speeds			Monthly Usage ¹	Mailboxes	One-Time Fees		
	Min	Typ	Max			Installation	Equipment Deposit ²	Monthly Service ³
RESIDENTIAL								
Basic	125K	500K	750K	12GB	5	100.00	100.00	49.95
Premium	250K	1M	1.5M	20GB	5			79.95
BUSINESS								
Business	500K	2.5M	3.5M	40GB	10			129.95
Professional	750K	3.5M	4.5M	50GB	25			159.95
Corporate	1M	4.5M	6M	60GB	30			199.95
Enterprise	1.5M	6.5M	8M	80GB	40			249.95
MOUNTAINS								
Alpine, Pierpoint, Camp Nelson	125K	375K	750K	8GB	5			69.95

1. Monthly usage is the allowed bandwidth per month. Surcharges apply for excess usage.

2. Equipment deposit is fully refundable upon termination of service after one year.

3. For areas served by Blue Ridge tower, add \$10 monthly rural service fee.

I Didn't Know That!

- OCS provides "A-to-Z" technology services
- Complete computer service and repair shop
- Variety of Internet access plans and packages
- Professional website development and hosting
- Programming and custom development
- eCommerce solutions
- Computer and Internet technology consulting
- Secure branch office inter-networking
- Internet-based "VOIP" telephone services

To set Account Preferences or make Payments Online, click **UserAdmin** on our website

On the road? Call our toll-free support at 888-OACYSCOM