Commercializing Brain-Inspired Computing
NICE 2017

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March 7, 2017
Brain Architecture (Auditory Pathway)

(Watts, Reverse Engineering the Auditory Pathway, 2012)
Building a Brain with Commodity Hardware

Early Google Machine, ~1999
4 PCs, 44 disk drives
Data centers based on commodity PCs

First Neocortex Machine, April 2015
10 cell phones
Data centers based on commodity cellphones
4.5X more efficient than PCs, and still improving
But the Earth is Covered with Phones, Idle Much of the Time

300 Million MicroColumns

2.6 Billion Phones
Galaxy S6 has 35 Gflops → 91 ExaFlops
Neocortex sells Cloud Services on Public Android Phones

There are **Billions** of TeraFlops sitting idle in 2 Billion Cellphones
And **Billions** of Dollars Waiting to Buy Them
We Put Them Together

Like Uber for Cloud Services
Cheaper than the giants, Better or Enabling for Some Types of Work
Neocortex sells Cloud Services on Public Android Phones

Corporate Customers
CIO, IT

Compute Jobs

neocortex Cloud Services

Compute Tasks
Phone Rent

PhonePaycheck

2.6 Billion
SmartPhone Owners

Storage
Hadoop
Database
Internal Assets
Indexed Web Crawl
Indexed Data Scrapes
Machine Learning Data Algorithms
Services
PhonePaycheck app

Users install the app and get paid.
$80/year for main phone (8 hr/day)
$240/year for spare phone (24 hr/day)

No effort required once installed.

Redeem balance after 30 days via PayPal. Or Donate to a favorite cause.

Social media – links to Facebook, Twitter, Snapchat to announce earnings or donations. Share button in the app.

Now on Android. Not on iOS, for technical and legal reasons.

PhonePaycheck.com secured.
PhonePaycheck app launched on March 1, 2017
Distributed Phones vs. Concentrated Servers

Neocortex is a new TYPE of Cloud Service with different strengths and advantages.
Applications

Search (Web Crawl)

Search engine result page for "torn brady" showing search results for Tom Brady news.

Website Load Testing

Website load testing tool showing hit counter page with active devices list:
- Verizon/SCH-I545 - Android 5.0.1 (API level 21)
- Verizon/SM-G930V - Android 5.1.1 (API level 22)
- Verizon/SM-G920V - Android 6.0.1 (API level 23)
- Verizon/SM-G930V - Android 6.0.1 (API level 23)
- Google/Nexus 6 - Android 7.0 (API level 24)
- Google/Nexus 5 - Android 6.0.1 (API level 23)
- Samsung/SM-G926F - Android 6.0.1 (API level 23)
- Google/Nexus 9 - Android 7.1.1 (API level 25)
- Verizon/SM-G920V - Android 6.0.1 (API level 23)
- Google/Nexus 4 - Android 5.1.1 (API level 22)
- Google/Galaxy Nexus - Android 4.3 (API level 18)
- Generic/Google Galaxy Nexus - 4.3 - API 18 - 720x1280 - Android 4.3 (API level 18)
- Google/Nexus 4 - Android 5.1.1 (API level 22)
This Ohio Town Voted For Obama By Huge Margins. Then It Flipped To Trump.

What happened in Nelsonville was a microcosm of what went wrong for Hillary Clinton.

“There are no jobs in this town, and we’re going bankrupt.”

– Ed Mash, Nelsonville, Ohio
Thank you, Youngstown, Ohio!
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