

Boot Ekahau in 12 seconds

Stop and Go survey points in 6 seconds

Neil Mavis

CWNA, CWSP, CWDP, CWAP, CCNA, FCC GROL, Security+

Mavis will save us from crummy Wifi

One word to remember be for buying a new laptop

CPU Benchmark

<https://www.cpubenchmark.net/laptop.html>

Demo

Three ways to solve a problem

- Free
- Low Cost
- Go Big

Three ways to solve a problem

- Free
 - Registry Cleaner
 - CCleaner
 - TuneUp Utilities

Three ways to solve a problem

- **Low Cost**
 - **RAM**
 - **Max out slots**
 - **Push 8Gb max to 12 Gb**
 - **SSD 15 x faster than HDD**

Three ways to solve a problem

- Go Big
 - New laptop
 - Married to CPU
 - Upgrade RAM & SSD later

Telling you again

One word to remember be for buying a new laptop

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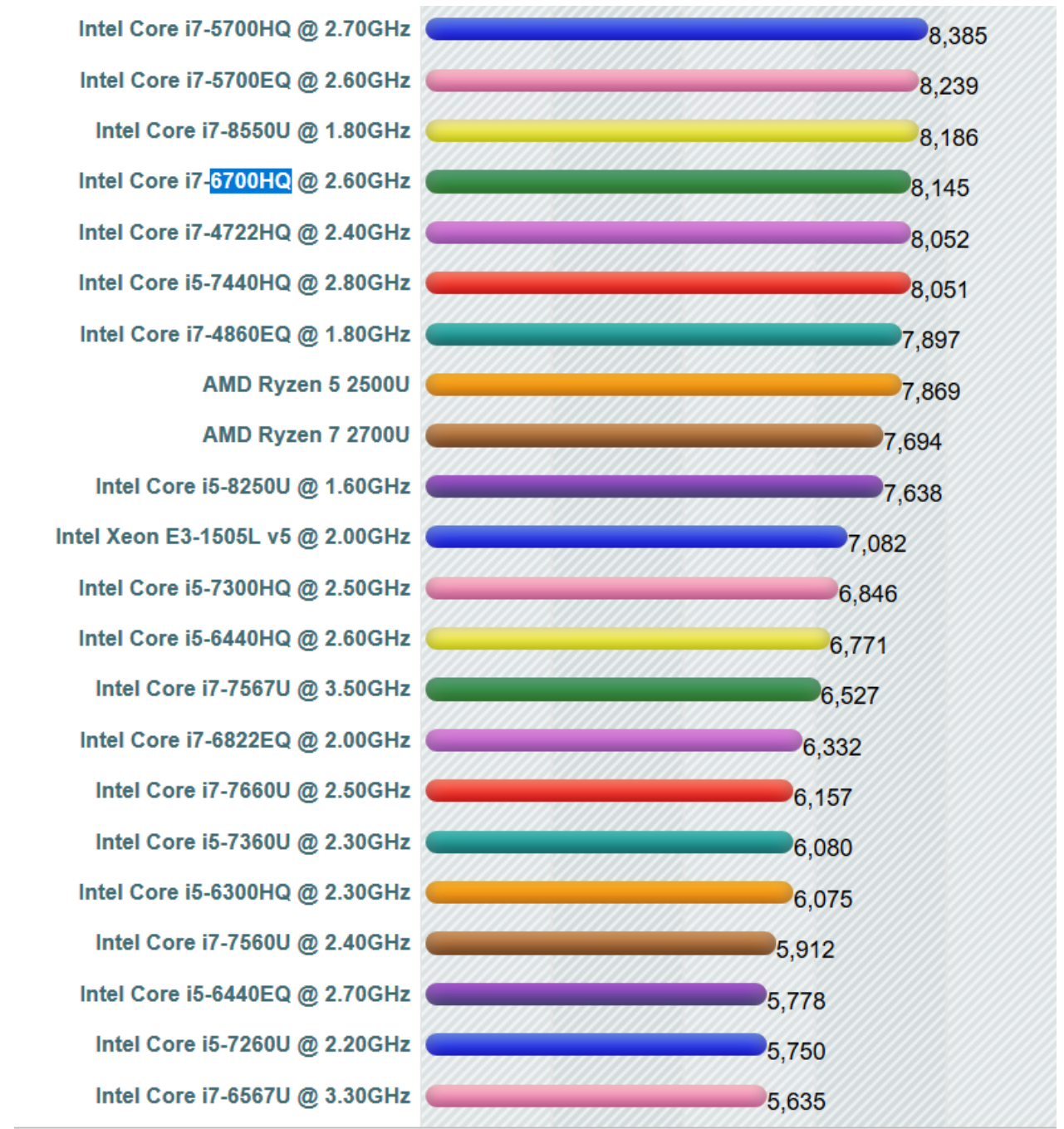
History

- Dell Latitude 1720
 - CPU index = 1,400
 - ESS startup = go get a cuppa coffee
- Dell Inspiron 7559
 - I7-6700HQ at 2.6 GHz
 - CPU index = 8,145
 - 16 GB RAM
 - SSD 15x faster than HDD
 - 12 second ESS start up

Beware:
i5 can beat an i7

Do not buy on sale
price.

What is in your PC?



When to Go Big?

- CPU Index >4,000
 - Cost/Benefit analysis to upgrade RAM & SSD
- CPU Index >8,000
 - Bang for the Buck?
 - 20% increase in CPU index for twice the price
 - RAM frame doubles from 16 GB to 32 GB

Told you!

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ESS Stress Test

- Road trip GPS with ESS
- 2.5 Mb ESS file
- CPU and Memory usage

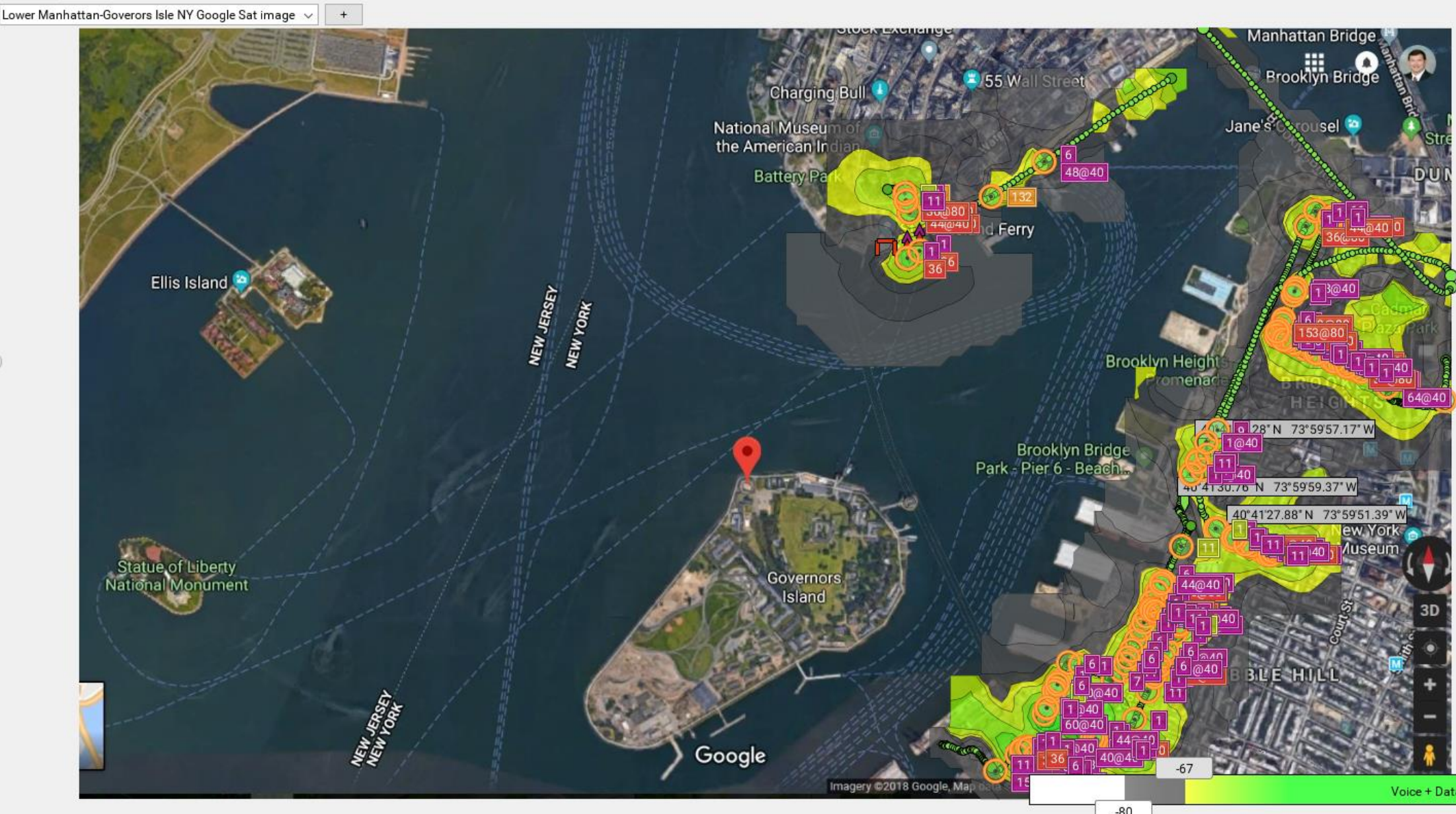
Optional- GPS survey of NYC Manhattan Brooklyn 2.5 Meg ESS file

Note to self:

Open

Perf Mon

Task Manager



Optional

- Boot EyePA while ESS is running

Recommended Dell laptops

- A: For importing PDF maps, or jpeg maps
 - [Dell 7559](#), with aftermarket Circuital 1 TB SSD. 2-slot 16GB chassis
 - <http://www.dell.com/en-us/shop/dell-laptops/inspiron-15-7000-gaming/spd/inspiron-15-7559-laptop/frtln5730h>
 - CPUbenchmark = 8,145 \$1,128.00
 - To get a higher benchmark, a 20% benchmark increase costs 100% extra
- B: When to upgrade above the Dell 7559
 - For importing *large* CAD files,
 - 1,000,000 sq ft warehouses,
 - War driving Manhattan Isle.
 - Will need to go from 2-slot 16GB chassis to 4-slot chassis 32GB.
 - Recommend Alienware with CPU=i7-7820HQ (CPUbenchmark 10,083)
 - 3.3GHz overclocked to 4 GHz pushed 10,086 benchmark to [14,317](#)
 - Do **not** recommend the Alienware with CPU=i7-7700HQ (CPUbenchmark 8,882)
 - Twice the price of Dell 7559 at \$2,499, but a 76% increase in benchmark.

Recommended Apple MacBook Pro laptops

MacBook from \$1299

- 12-inch (diagonal) LED-backlit Retina display
- 1.2GHz dual-core Intel Core m3, 1.3GHz dual-core Intel Core i5, or 1.4GHz dual-core Intel Core i7 processor Turbo Boost up to 3.6GHz
- Up to 10 hours battery life¹
- 256GB or 512GB SSD²
- Force Touch trackpad
- 2.03 pounds³



MacBook Pro 13-inch from \$1299

- 13.3-inch (diagonal) LED-backlit Retina display
- 2.3GHz dual-core Intel Core i5 or 2.5GHz dual-core Intel Core i7 processor Turbo Boost up to 4.0GHz
- Up to 10 hours battery life¹
- 128GB, 256GB, 512GB, or 1TB SSD²
- Force Touch trackpad

MacBook Air 13-inch from \$999

- 13.3-inch (diagonal) LED-backlit widescreen display
- 1.8GHz dual-core Intel Core i5 or 2.2GHz dual-core Intel Core i7 processor Turbo Boost up to 3.2GHz
- Up to 12 hours battery life¹
- 128GB, 256GB, or 512GB SSD²
- Multi-Touch trackpad
- 2.96 pounds³



MacBook Pro 13-inch from \$1799

- Touch Bar and Touch ID
- 13.3-inch (diagonal) LED-backlit Retina display
- 3.1GHz or 3.3GHz dual-core Intel Core i5 or 3.5GHz dual-core Intel Core i7 processor Turbo Boost up to 4.0GHz
- Up to 10 hours battery life¹
- 256GB, 512GB, or 1TB SSD²

MacBook Pro 15-inch from \$1999

- 15.4-inch (diagonal) LED-backlit Retina display
- 2.2GHz, 2.5GHz, or 2.8GHz quad-core Intel Core i7 processor Turbo Boost up to 4.0GHz
- Up to 9 hours battery life¹
- 256GB, 512GB, or 1TB SSD²
- Force Touch trackpad
- 4.49 pounds³



MacBook Pro 15-inch from \$2399

- Touch Bar and Touch ID
- 15.4-inch (diagonal) LED-backlit Retina display
- 2.8GHz, 2.9GHz, or 3.1GHz quad-core Intel Core i7 processor Turbo Boost up to 4.1GHz
- Up to 10 hours battery life¹
- 256GB, 512GB, 1TB, or 2TB SSD²

Recommended Apple MacBook Pro laptops for ESS

- Do not bother with the MacBook Air
- For ESS PDF based layout maps, get CPU=7700HQ. Benchmark = 8881
- For *large* CAD imported layouts, >1M sqft projects, CPU = 7920HQ. Benchmark = 10166, turbo to 13177

Macbook Pro comparison for ESS recommendation							
https://everymac.com/systems/apple/macbook_pro/index-macbookpro.html							
Model	Macbook Air 13 inch	Pro 15 inch	Pro 13 inch	Pro 13 inch	Pro 15 inch		
CPU	i7	i7	i7	i7	i7	i7	i7
CPU clock	1.4	2.2	2.8	2.5	3.5	3.1	3.1
CPU name		P7500	7700HQ	7660U	7567U	7920HQ	7920HQ
Turbo boost to (GHz)	3.6	3.2	4	4	4	4	4
Turbo boost %	157%	45%	43%	60%	14%	29%	29%
RAM (GB)	2		16	16	16	16	16
CPU benchmark a base clock speed			8881	6162	6527	10166	10166
CPUbenchmark due to turboboost			12687	9859	7459	13117	13117
Price			\$ 2,399.00	\$1,999.00	\$2,879.00	\$ 3,399.00	\$ 3,399.00

Comparison of Dell vs MacBook Pro for ESS

Macbook Pro comparison for ESS recommendation						
	https://everymac.com/systems/apple/macbook_pro/index-macbookpro.html					
Model	Macbook Air 13 inch		Pro 15 inch	Pro 13 inch	Pro 13 inch	Pro 15 inch
CPU	i7	i7	i7	i7	i7	i7
CPU clock	1.4	2.2	2.8	2.5	3.5	3.1
CPU name		P7500	7700HQ	7660U	7567U	7920HQ
Turbo boost to (GHz)	3.6	3.2	4	4	4	4
Turbo boost %	157%	45%	43%	60%	14%	29%
RAM (GB)	2		16	16	16	16
CPU benchmark a base clock speed			8881	6162	6527	10166
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Price			\$ 2,399.00	\$1,999.00	\$2,879.00	\$ 3,399.00
Dell CPU Benchmark comparison			Dell 7559			Alienware with i7-7820HQ
CPU benchmark a base clock speed			8145			10083
CPU benchmark due to turboboost			8145			14317
Price			\$ 1,128.00			\$ 2,499.00
CPU benchmark % diff			-9%			-1%
CPU benchmark % diff - turboboost						8%
Price difference %			-113%			-36%
			Select if Ekahau import map format is PDF or JPEG images			Select if Ekahau import map format is CAD, or very large projects (>1M sq ft)