

Retirement?

Scott Bradner

ABCD

2018-01-12

Things to talk about

- What has Scott been up to?
- Whole lot of nothing out there
- An altruistic Verizon?

Since last year

- Finished remaining legal cases

Sprint v lots of cable companies

Sprint: we patented voice over packet nets in the mid 1990s

Scott: oh, yeah: how about the ARPANET folks in the 1970s & 1980s?

Sprint won some, others settled

Contract dispute – settled

Patent office action - waiting

No new cases (so far)



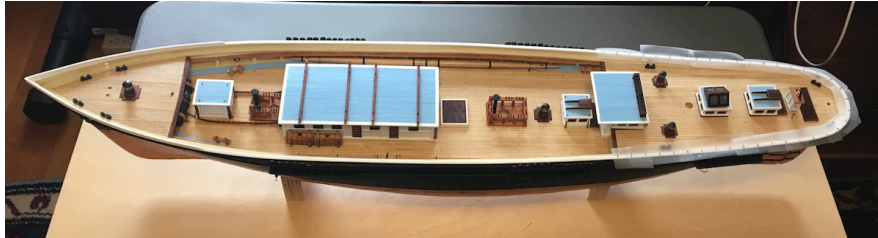
- Hanging around Berkman Klein Center

Talk: *A History of the Internet, Hint: it was not the Bomb*
some time this spring

Finished the rope

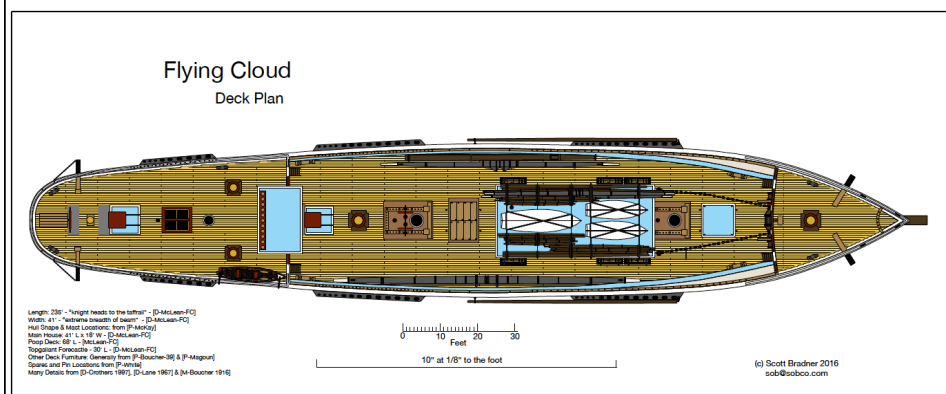


Back to the model itself

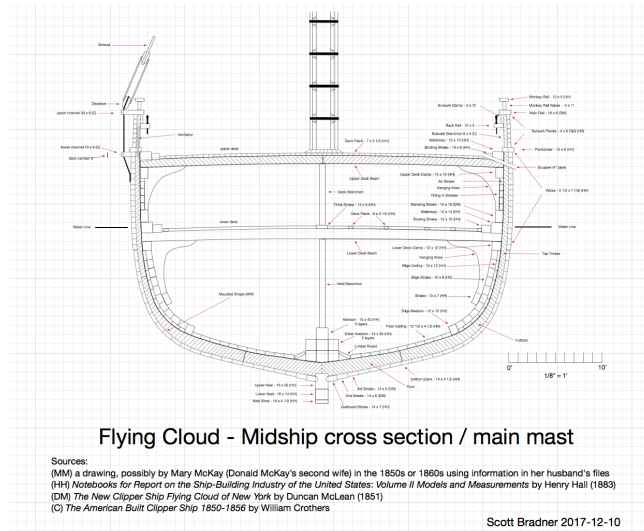


- But realized the original kit was wrong in too many places
- Even though I had thrown away almost all of the kit, there was enough left to invalidate the model
- So I'm restarting from scratch

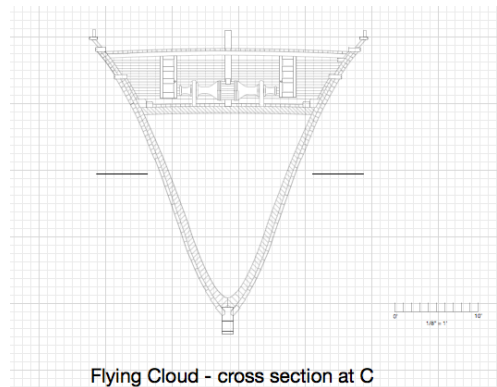
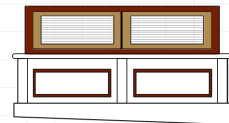
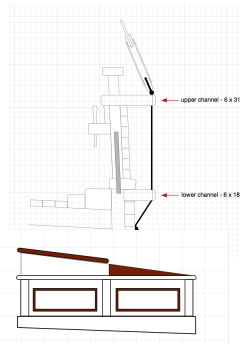
With drawings



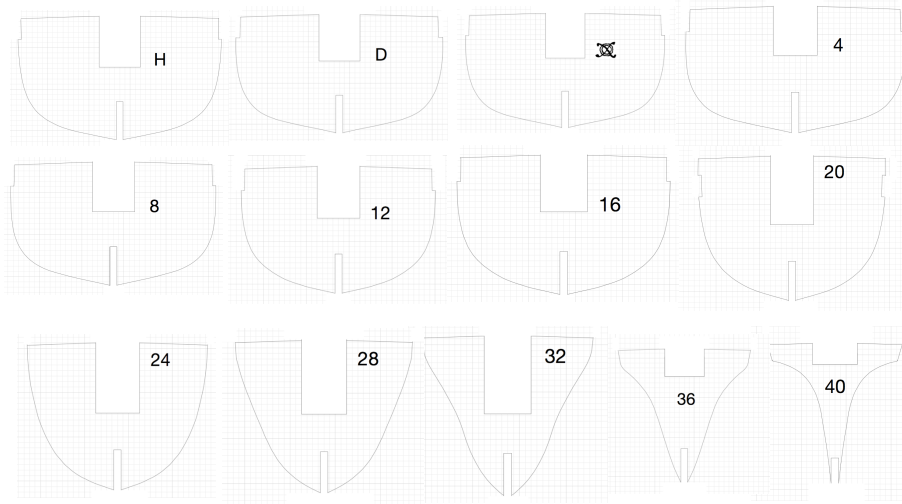
And More drawings



And Still More drawings



Dozens of drawings



WHOLE LOT OF NOTHING OUT THERE:

i.e, we took the road trip that I had been talking about

Stats

- May 21 – July 7
- 10,373 miles
Almost all on 2-lane roads
- 21.5 mpg
- <10 hours of (light) rain
- 973 photos retained
- One brush fire
- One almost-tornado
- One speeding ticket

date	odometer	milage	note
2017 5 21	7,423		Hyde Park, NY
2017 5 22	7,631	208	Easton, PA
2017 5 23			Lancaster, PA
2017 5 24	7,968		Kearneyville WV
2017 5 25	8,133	165	Warm Springs, VA
2017 5 26	8,347	214	Pounding Mill, VA
2017 5 27	8,549	202	Knobville, TN
2017 5 28	8,744	195	Mount Juliet, TN
2017 5 29	8,943	199	Jackson, TN
2017 5 30			Jonesboro, AK
2017 5 31	9,359		Little Rock, AK
2017 6 1	9,515	156	Fort Smith AK
2017 6 2	9,711	196	Oklahoma City, OK
2017 6 3	9,931	220	Canadian, TX
2017 6 4	10,158	227	Clayton, NM
2017 6 5	10,409	251	Farmington, NM
2017 6 6	10,797	388	Cinle, AZ
2017 6 7	11,123	326	Gallup, NM
2017 6 8	11,246	123	Snowflake, NM
2017 6 9	11,480	234	Blyth, CA
2017 6 10	11,848	368	San Diego, CA
2017 6 11	11,848		San Diego, CA
2017 6 12	12,098	250	Bakersfield, CA
2017 6 13	12,344	246	Pleasant Hill, CA
2017 6 14	12,344		Pleasant Hill, CA
2017 6 15	12,665	321	Groveland, CA
2017 6 16			Carson City, NV
2017 6 17	13,040		Austin, NV
2017 6 18	13,263	223	Elko, NV
2017 6 19	13,529	266	Twin Falls, ID
2017 6 20	13,808	279	Thayne, WY
2017 6 21	14,079	271	Yellowstone, MT
2017 6 22			Cody, WY
2017 6 23	14,270		Buffalo, WY
2017 6 24	14,655	385	Hulett, WY
2017 6 25			Lead, SD
2017 6 26	15,054		Dickinson, ND
2017 6 27	15,294	240	Wall, SD
2017 6 28	15,575	281	Winnier, SD
2017 6 29	15,743	168	Sox City, IA
2017 6 30	15,993	250	Marshalltown, IA
2017 7 1	16,260	267	Pecoria, IL
2017 7 2	16,544	284	Logansport, IN
2017 7 3	16,732	188	Buyrus, OH
2017 7 4			Kittanning PA
2017 7 5	17,180		Williamsport, PA
2017 7 6	17,361	181	Athens, NY
2017 7 7			Cambridge, MA
	17,796	10,373	21.5 mpg



Mini “Camper”



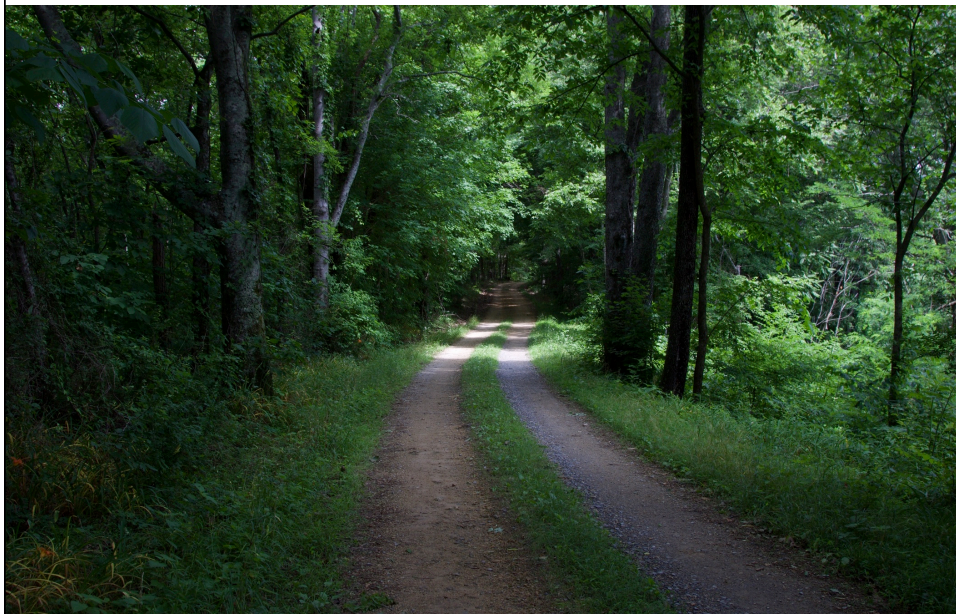
Planning Process

- Get to hotel/motel
- Decide where to spend next night
- Use Google “nearby” to find hotel/motel
- Reserve on line
- Plot turn by turn path using Google map
Edit into Word doc
- In morning, print out path
- Tape path to dashboard
- Fill gas tank & ice chest then start driving

The road goes on forever



2nd Generation Trace



Vanishing Horizon



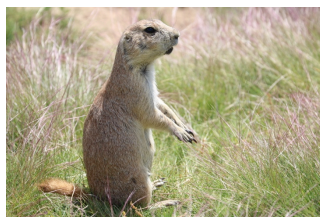
Vanishing Horizon, again & again



Some Traffic



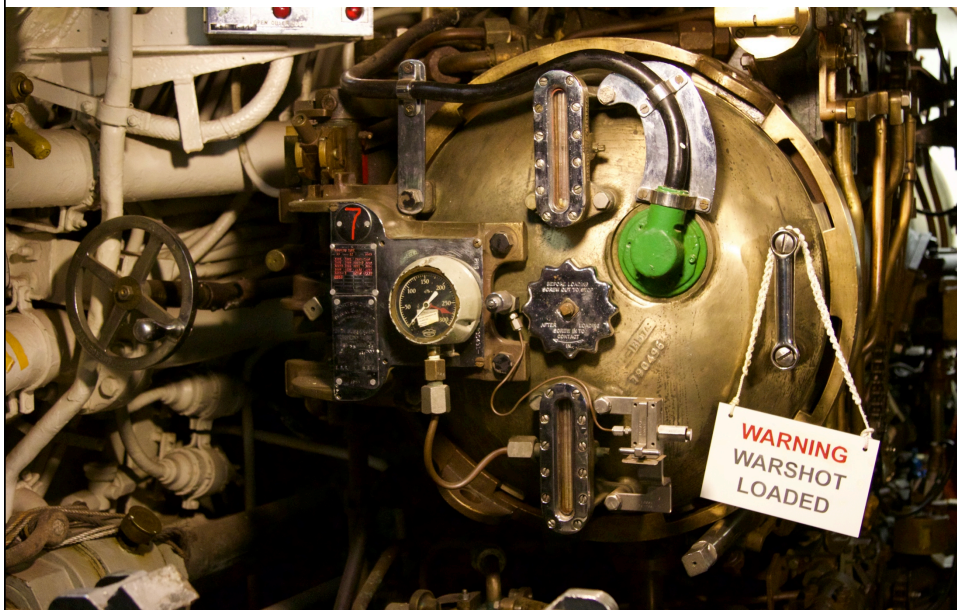
Some Beasties



Local Culture



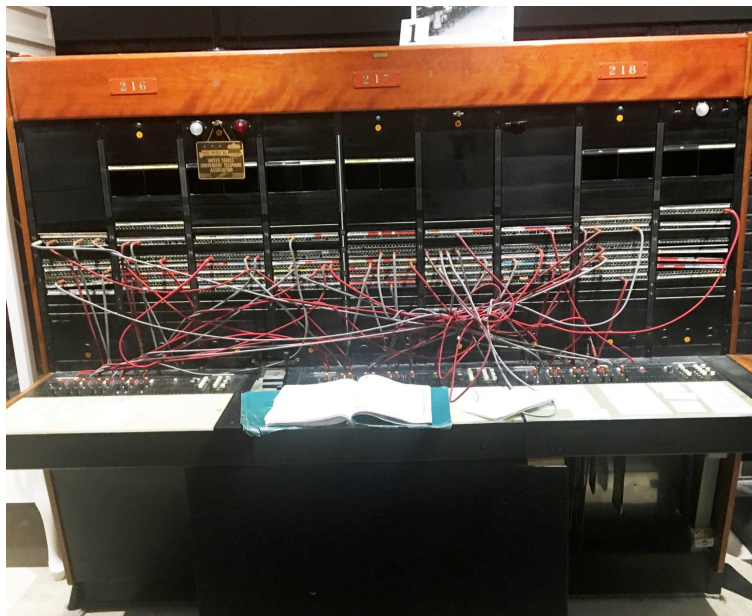
A Submarine in Arkansas



Small Town America



Pre Internet



The Internet?



Cellular Technology



Signage for the Unobservant



Spring



Individualism



New England, ND



Beauty Beside the Road



From the Other side of the Country



Why?



Trains are still used



At least to Haul Trains



Sacred Site #1



Sacred Site #2



History



Shorter History



Local Museums



More Beauty



Primary Goal: The Road



Lasting Impression



THERE STILL IS AN INTERNET

At least today

Still no governance

- An amazing thing about the Internet is how little has changed in the area of Internet governance
Governance = saying who makes the rules & deciding who pays for what
- Many years of worry but no real change
ITU, UN, US, etc.
Some individual countries (e.g. China) excepted
- The Internet is still the only major international anything that is not under heavy regulation
Internet is currently about 6% of US GDP, 5% EU GDP

Protecting customers & services

- March 2015: The FCC adopted an Open Internet Order that reclassified ISPs as being covered by Title II of the Communications Act
i.e. making ISPs subject to common carriage rules requiring fair treatment of their customers
- Title II was a very big hammer for the problem of ISPs treating customers differently but the courts had told the FCC that it was their only option
The worry was not what the FCC said they would do but what a future FCC might do with the hammer

Elections have Consensuses

- Trump elevated FCC commissioner Ajit Pai to be FCC Chair & filled out the commissioner ranks
Producing a 3-2 majority of Republicans
- Pai had opposed the original Title II order & when he became Chair he said he would repeal it
One justification was the claim that investment in communications infrastructure had fallen
Independent analysts say the opposite was the case
- The FCC majority posted a proposed repeal order for public comment on May 18, 2017

Comments Please

- The FCC received over 21 M comments
- Many comments were forged by bots using stolen email addresses
- But many (millions) of comments by people or groups of people
E.g. in July 2017 200 “prominent Internet pioneers and engineers” sent a letter outlining multiple factual errors in the proposed order
- Analysis of the comments showed that the bots overwhelmingly wanted to repeal the Title II designation and the humans overwhelmingly wanted to retain it

Comments? What Comments?

- Normally, the FCC responds to comments in the final order – they did not do so in this case
- In December 21 2017 “big name leaders in the Internet world” asked congress to block the FCC vote
 - Vint Cerf, Diffy & Hellman, Woz, Burners-Lee, Ron Rivest, David Reed, Steve Crocker, etc.
- US polls indicate proposal is very unpopular (across the board)

FCC Acted Anyway

- On December 14, 2017 the commission voted along party lines to repeal the Title II order
- FCC Commissioner Mignon Clyburn filed a very strong dissent (worth reading)
- Order goes into effect when published in Federal register



“Restoring Internet Freedom”

- The Order is referred to as *The Restoring Internet Freedom Order*
- Gets the FCC out of regulating ISPs
 - Network neutrality rules will rely on an honor system
 - Relying on Verizon being altruistic
- Requires “transparency” from ISPs on what they do
 - Assumes customers could move to an alternate ISP if they do not like what they see

What this Order Means

- ISPs are now legally permitted to treat their customers unfairly
 - Block legal websites (e.g., Facebook)
 - Block legal applications (e.g., Skype)
 - Block legal devices (e.g., iPhones)
- Can charge extra for popular or new services
- ISPs are not required to do this, but now they can do so as long as they are “transparent” and say what they are doing

Competition in a Parallel Universe

- The FCC Order assumes that if a customer does not like the service they are getting from one ISP they can move to another

Such competition does not exist in most of the US for actual high-speed service

Why

- Too much of the discussion in the 539 page order is misleading or flat out wrong
- The US Internet was not broken and did not need fixing

At least according to almost everyone other than the carriers and many Republicans

- Yet Pai “fixed” it anyway – why?

Political religion?

To force congressional action?

As a pawn of the carriers?

What's Next?

- Lots of court time
Likely years
- Many, but not all, legal experts feel that the FCC is likely to lose
- Could be an injunction keeping current rules in place until courts rule
- Congress could pass network neutrality laws
Not likely before 2019 because of mid-term elections
Issue seen as a fund raising opportunity

We will watch the developments together

Thank you

Have a good year