

FPGA Industry Trends 2021

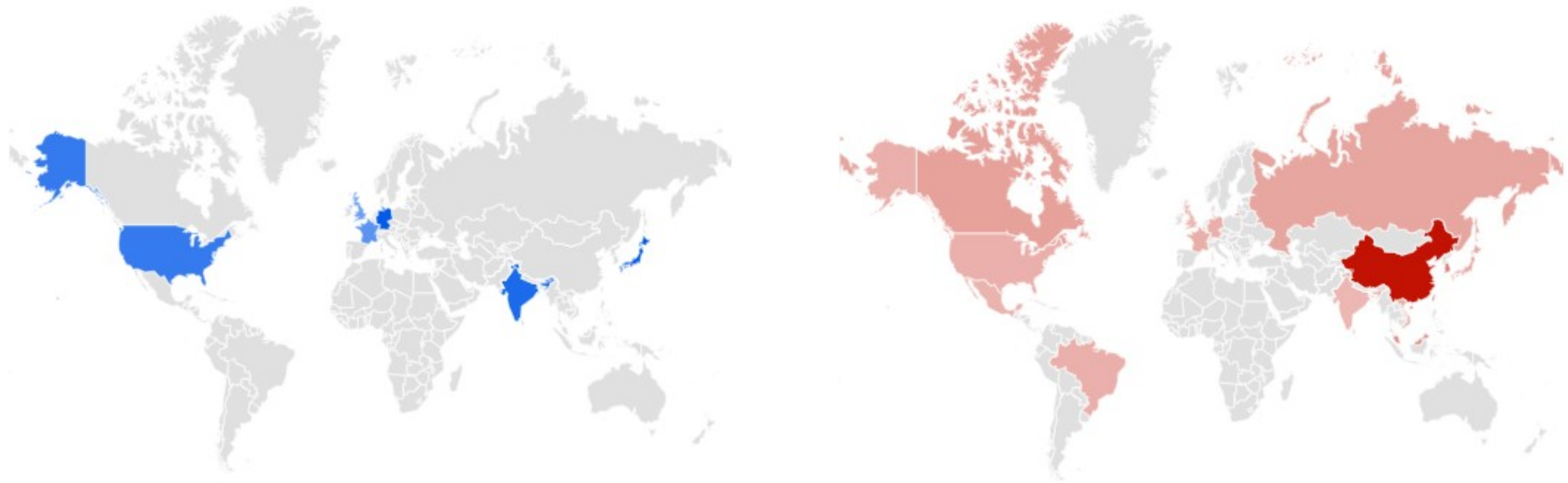


by Iain Waugh

Note

- The slides just show the number of Google search-engine requests
- The results may be misleading
- The results are open to interpretation
- Apologies for excluding Lattice Semiconductor (their name is too generic for search trends)

Vivado vs. Quartus (2017)



■ Vivado
■ Quartus

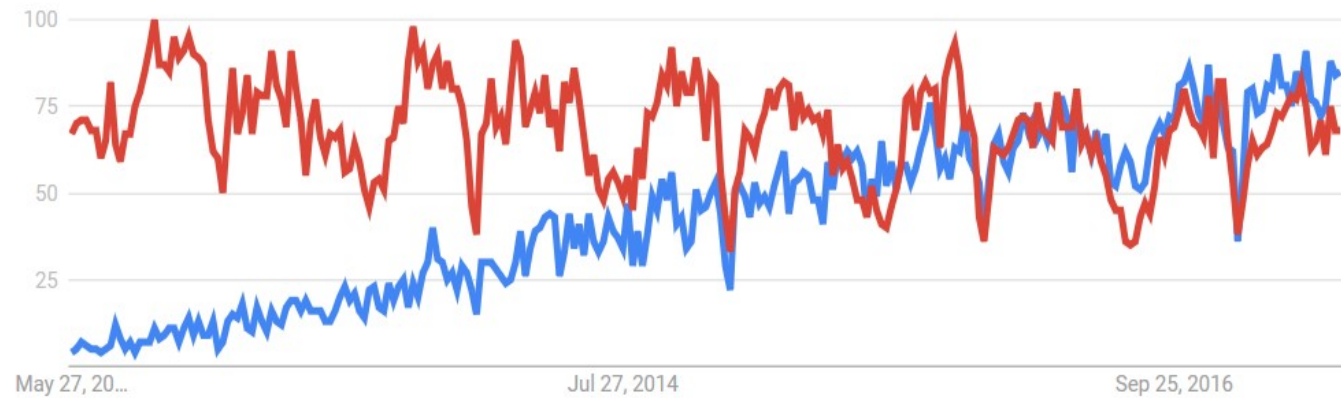
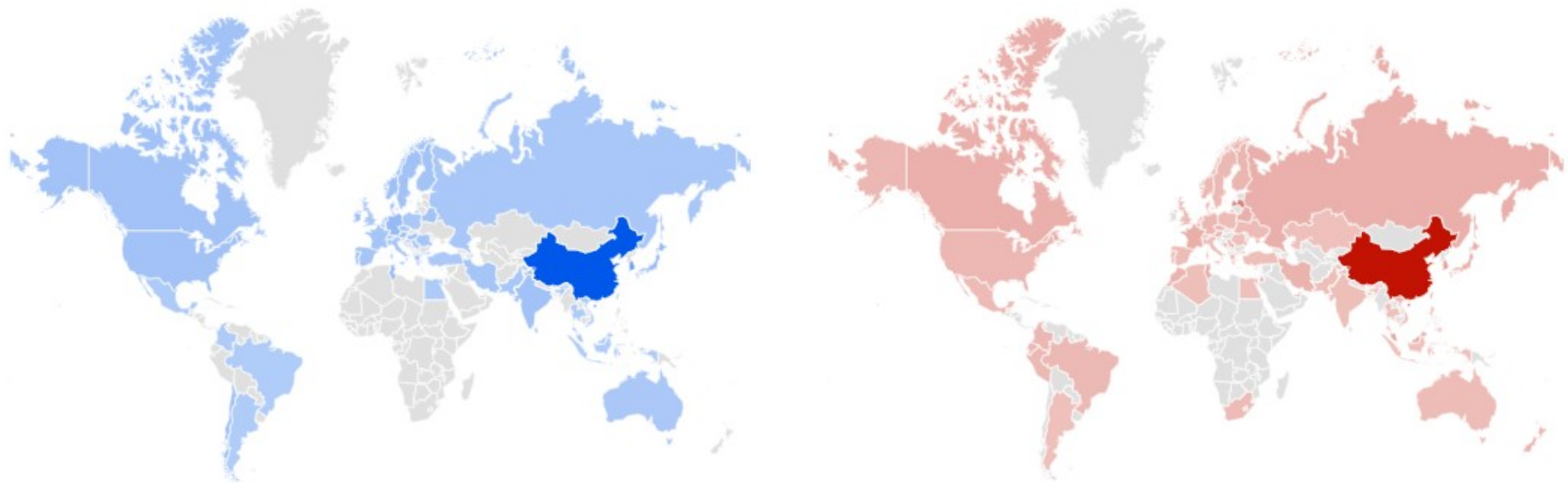


Image credit: Google Trends

Vivado vs. Quartus (2019)



■ Vivado
■ Quartus

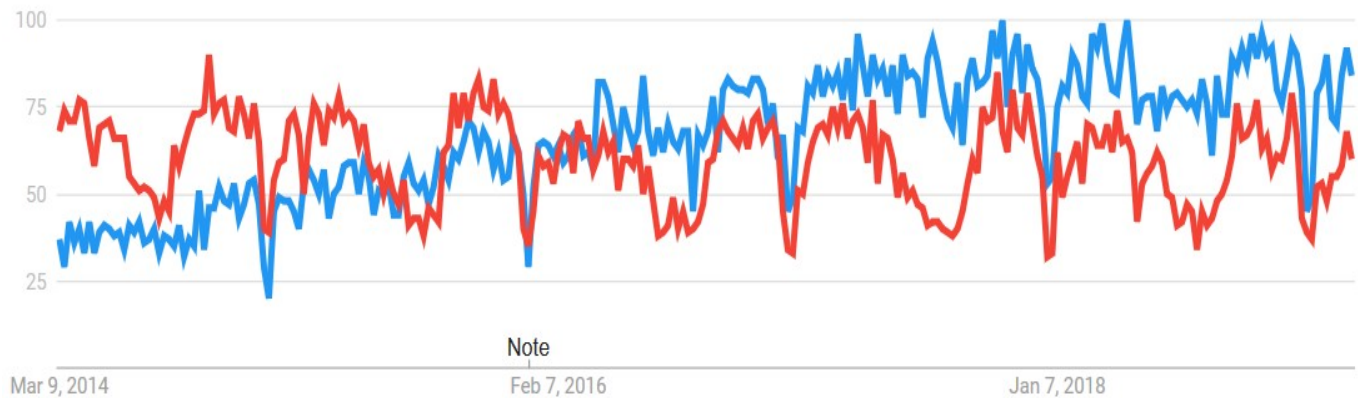


Image credit: Google Trends

Vivado vs. Quartus (2021)

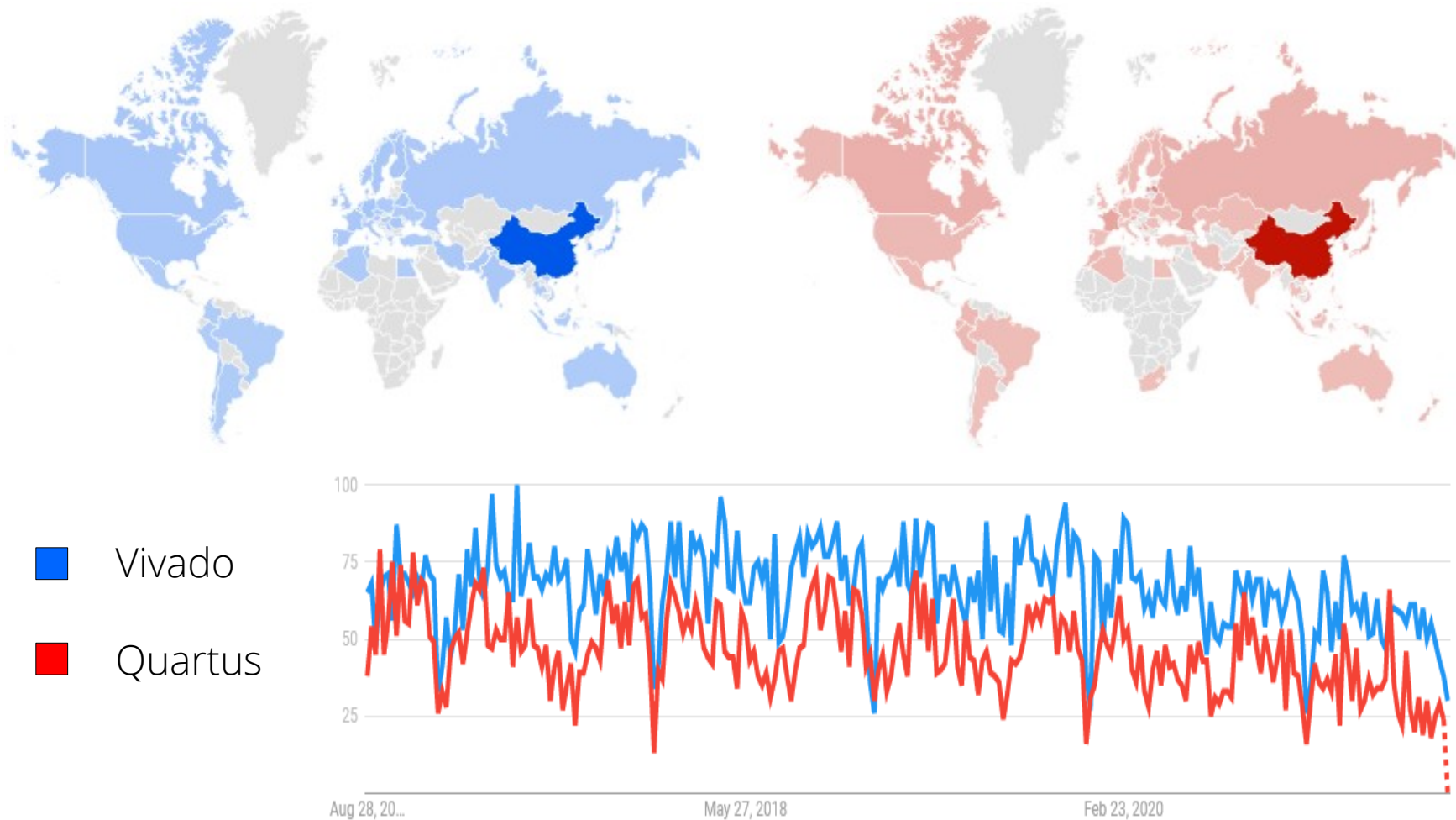


Image credit: Google Trends

Xilinx vs. Altera (2017)

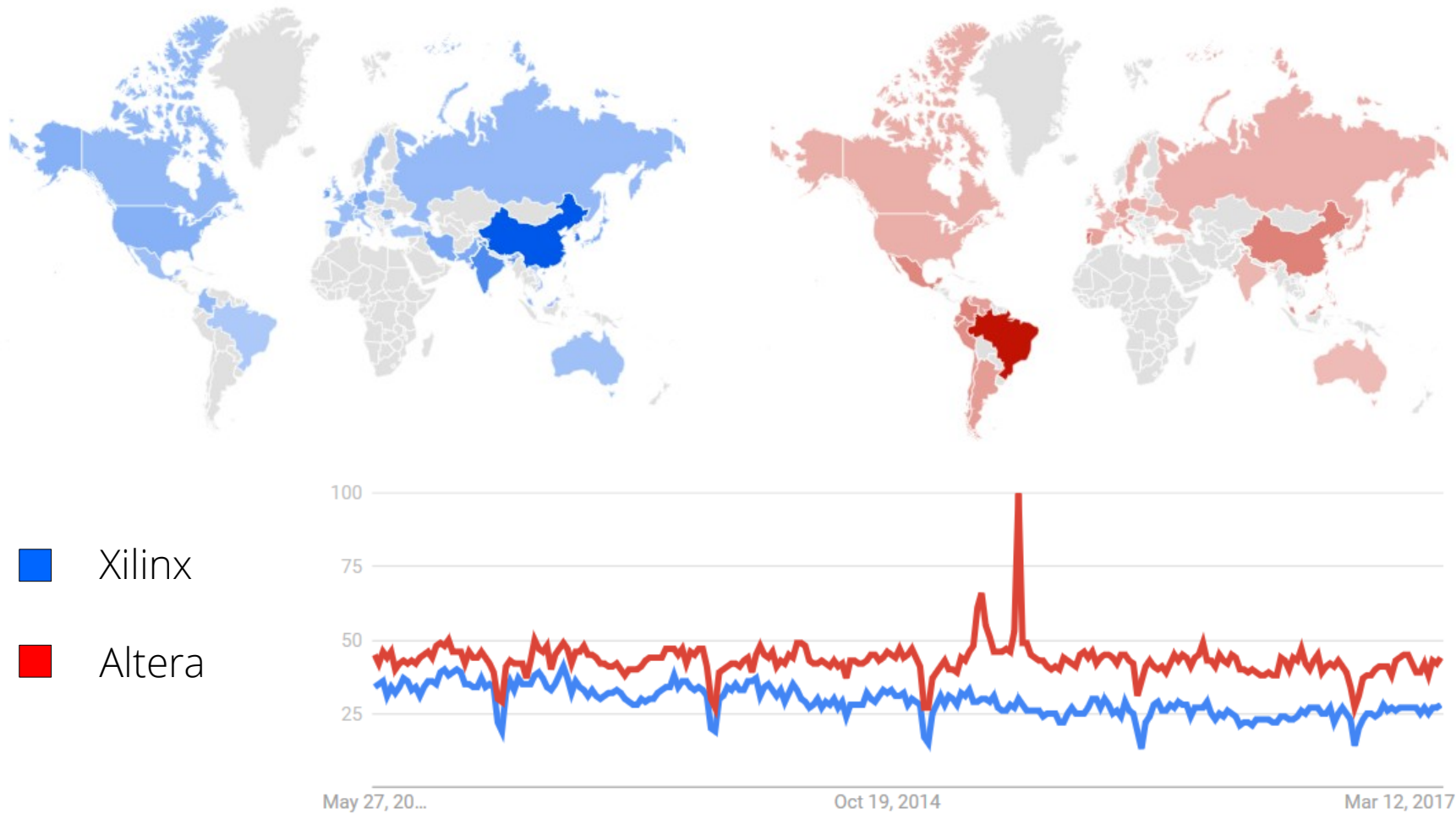
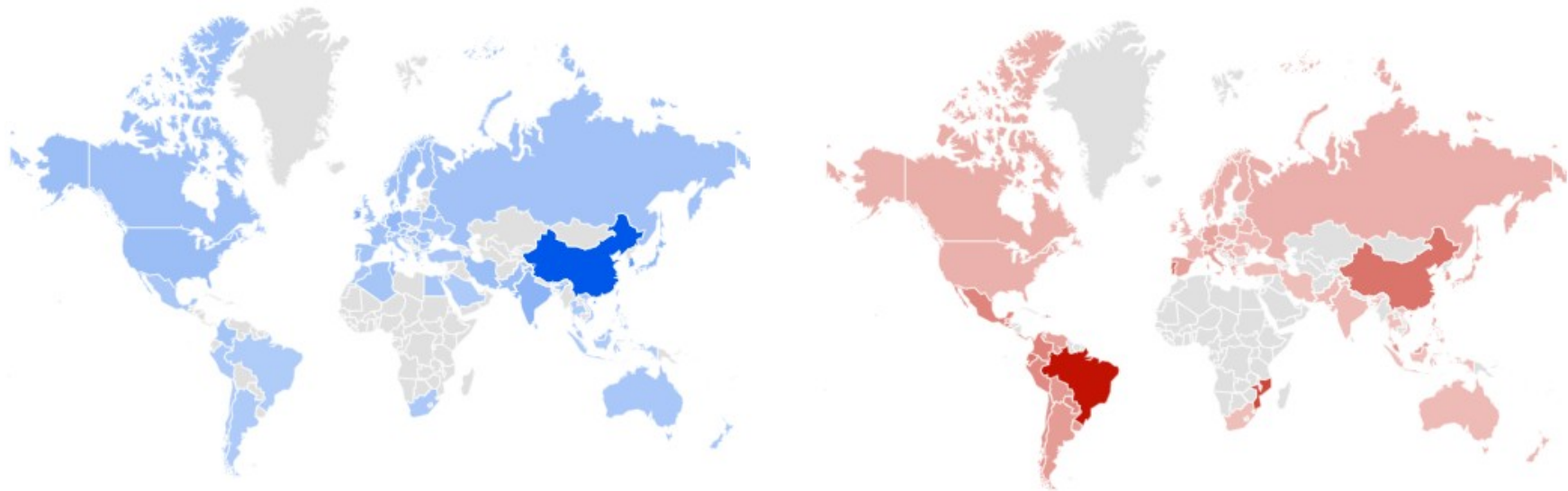


Image credit: Google Trends

Xilinx vs. Altera (2019)



■ Xilinx
■ Altera

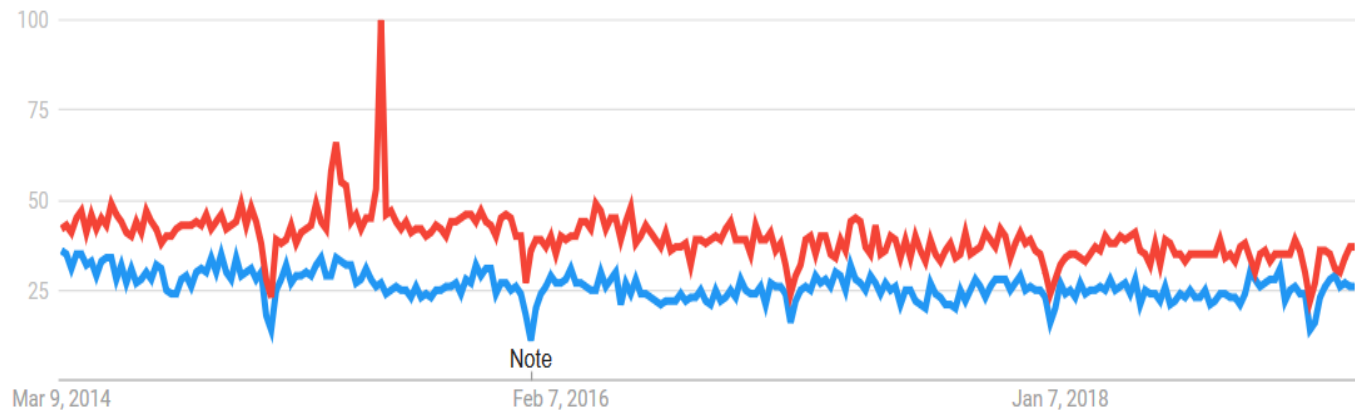
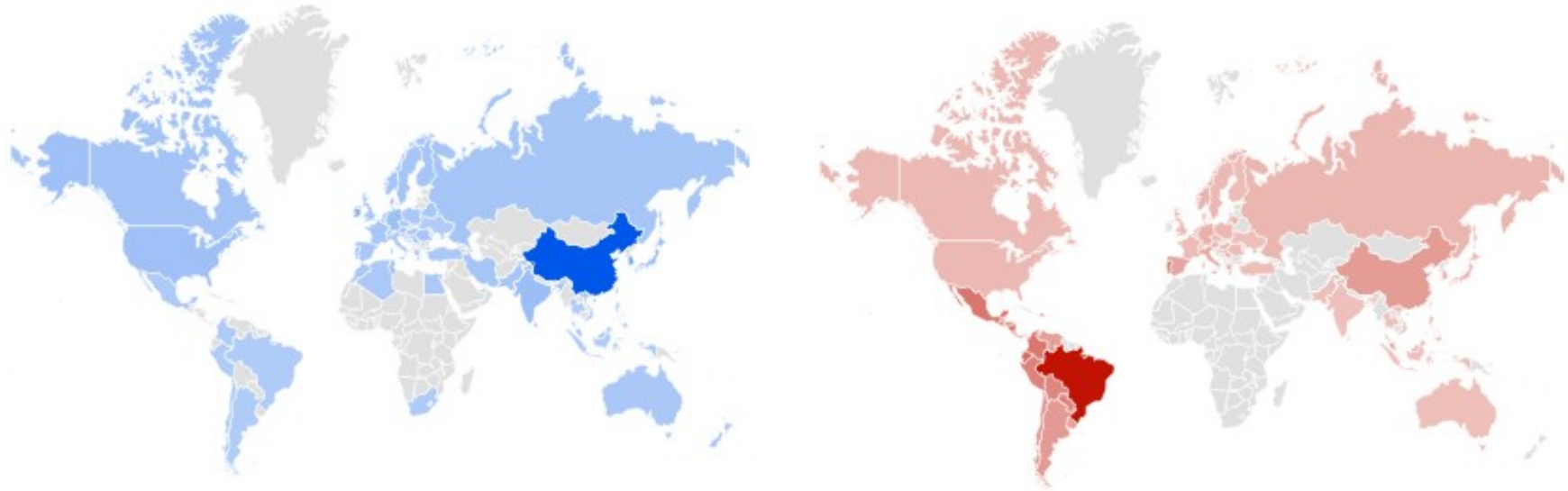


Image credit: Google Trends

Xilinx vs. Altera (2021)



■ Xilinx
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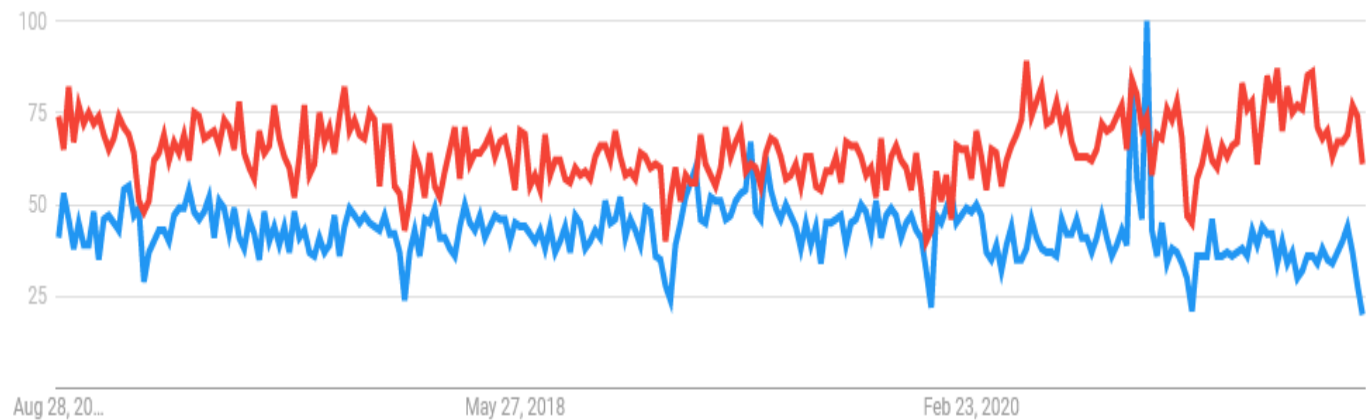


Image credit: Google Trends

Xilinx vs. Altera/Intel (2019 Finance)

122.81 USD -3.83 (3.02%) ↓

Closed: 4 Mar, 7:43 pm GMT-5 · Disclaimer
After hours 122.45 -0.36 (0.29%)



12.65 USD +0.20 (1.61%) ↑

Closed: 4 Mar, 4:47 pm GMT-5 · Disclaimer
After hours 12.65 0.00 (0.00%)



53.94 USD +0.64 (1.20%) ↑

Closed: 4 Mar, 7:30 pm GMT-5 · Disclaimer
After hours 53.85 -0.090 (0.17%)



Xilinx Intel
Lattice

Image credit: Google Finance



Xilinx vs. Altera/Intel (2021 Finance)

\$153.25 ↑182.85% +99.07 5Y

After Hours: **\$153.18** (↓0.046%) -0.070
Closed: Aug 25, 7:54:37 PM UTC-4 · USD · NASDAQ · Disclaimer

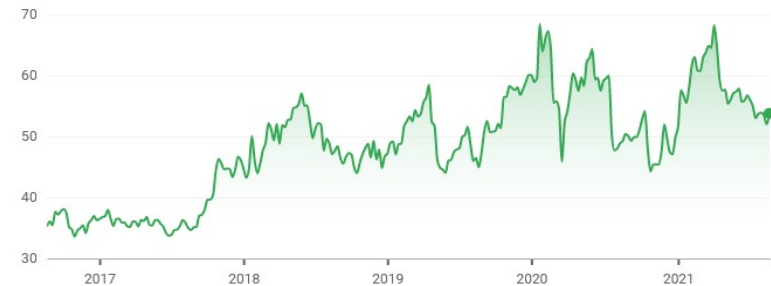
1D 5D 1M 6M YTD 1Y 5Y MAX



\$53.81 ↑52.61% +18.55 5Y

After Hours: **\$53.90** (↑0.17%) +0.090
Closed: Aug 25, 7:56:10 PM UTC-4 · USD · NASDAQ · Disclaimer

1D 5D 1M 6M YTD 1Y 5Y MAX



\$57.84 ↑838.96% +51.68 5Y

After Hours: **\$57.84** (0.00%) 0.00
Closed: Aug 25, 4:11:57 PM UTC-4 · USD · NASDAQ · Disclaimer

1D 5D 1M 6M YTD 1Y 5Y MAX

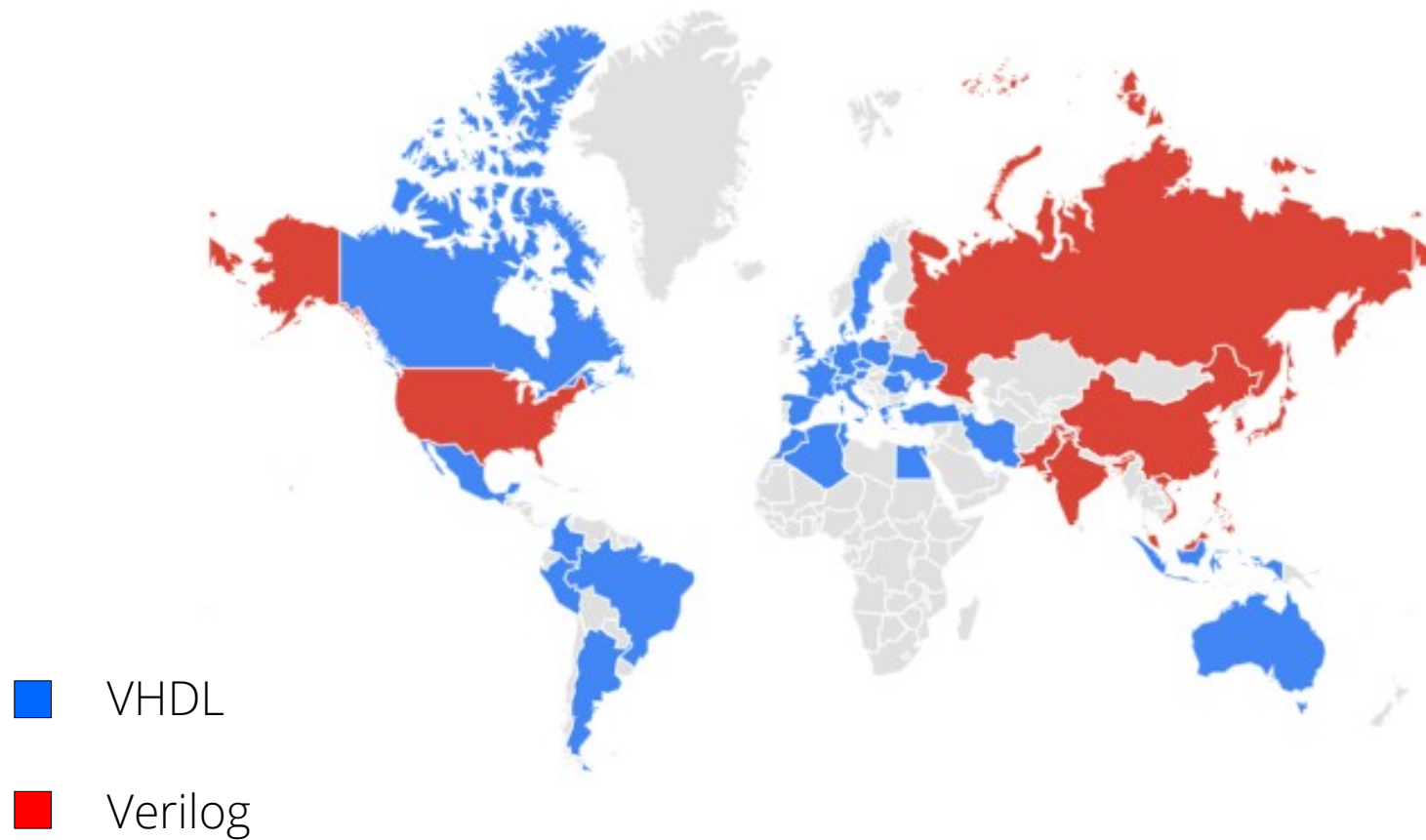


Xilinx Intel
Lattice

Image credit: Google Finance



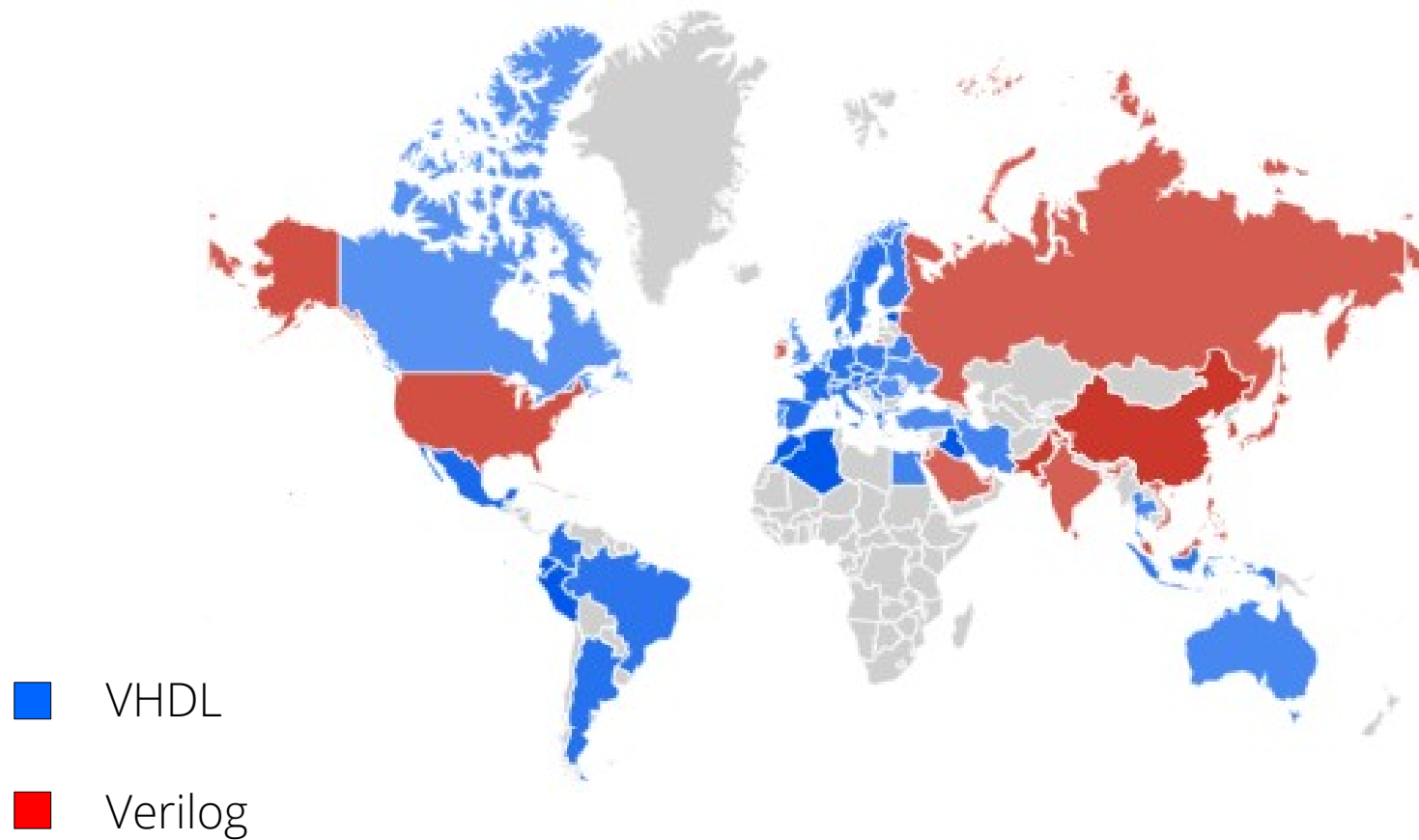
VHDL vs. Verilog (2017)



Most common HDL language by country

Image credit: Google Trends

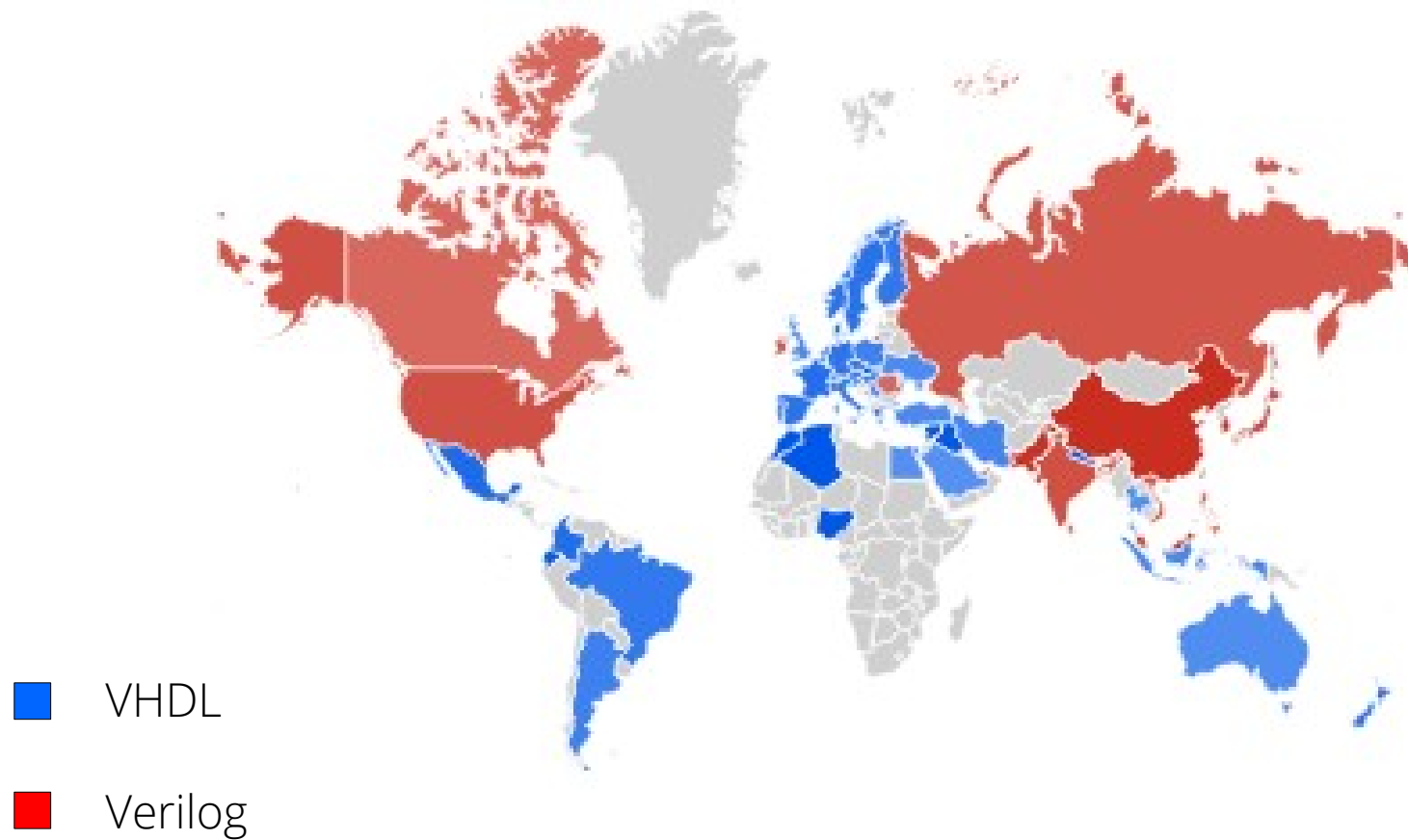
VHDL vs. Verilog (2019)



Most common HDL language by country

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VHDL vs. Verilog (2021)



Most common HDL language by country

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VHDL vs. Verilog (2017)

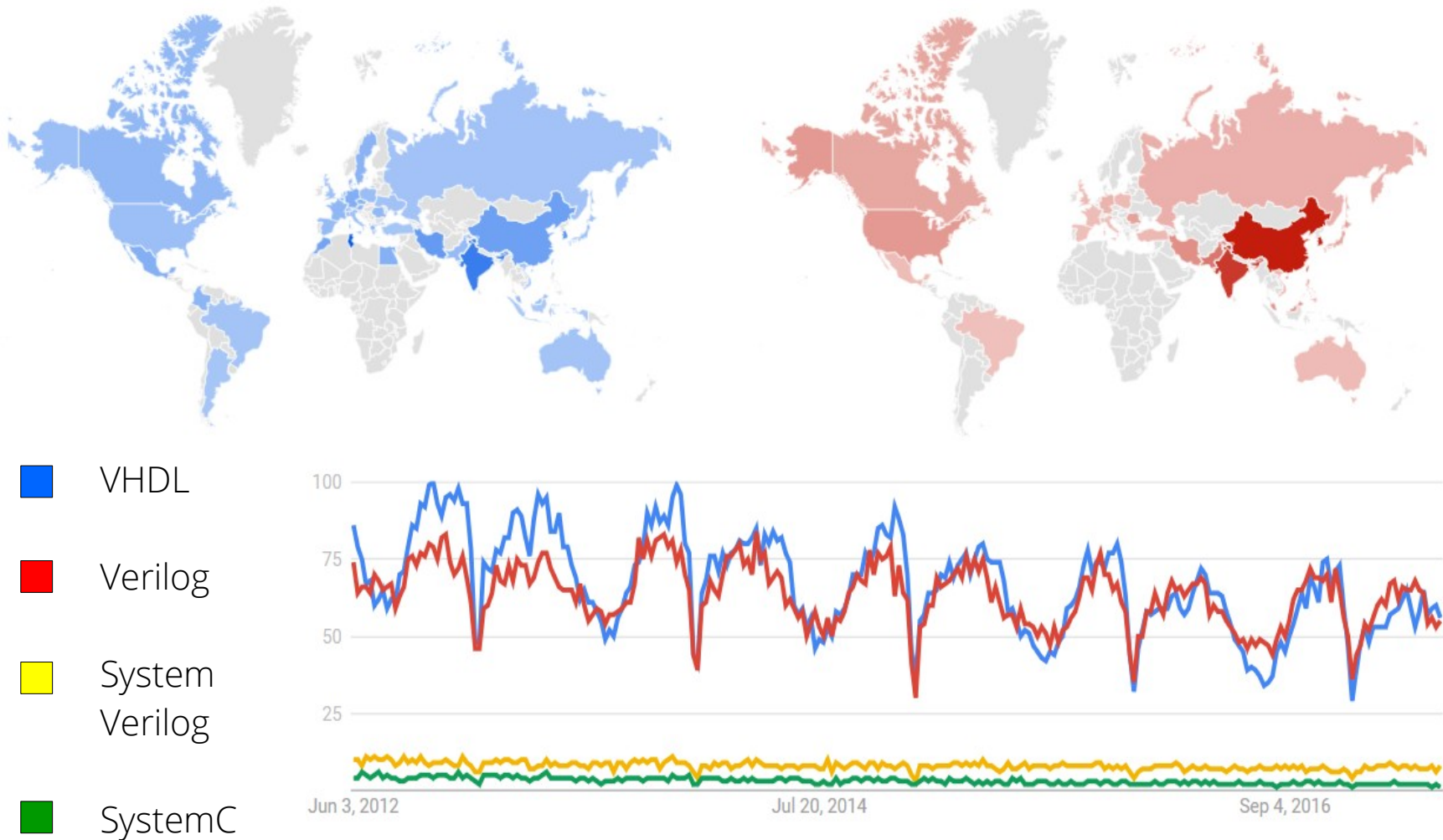
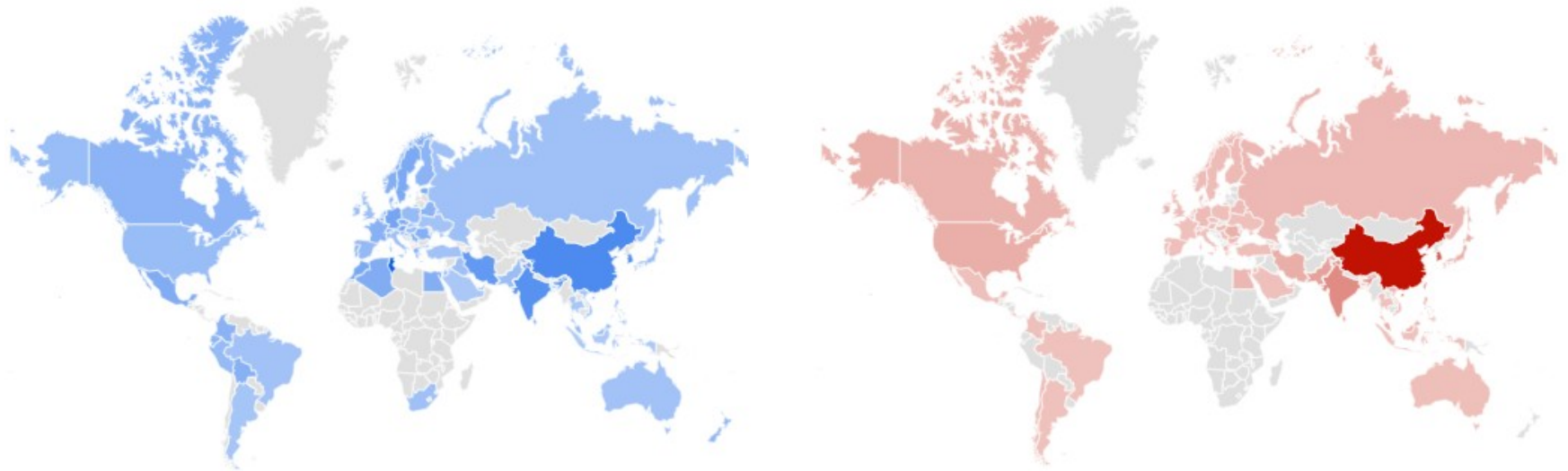


Image credit: Google Trends

VHDL vs. Verilog (2019)



- VHDL
- Verilog
- System Verilog
- SystemC

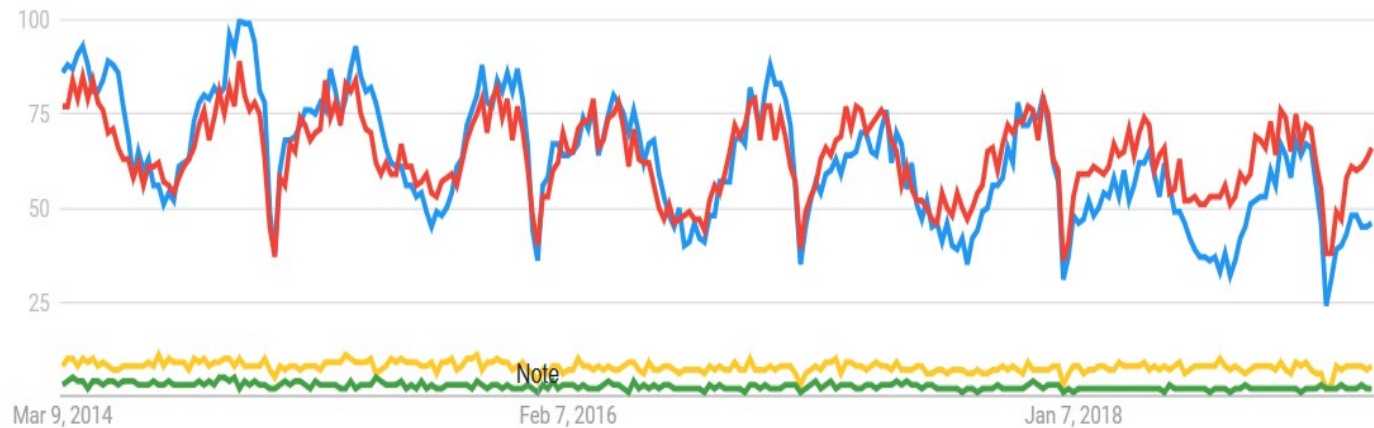
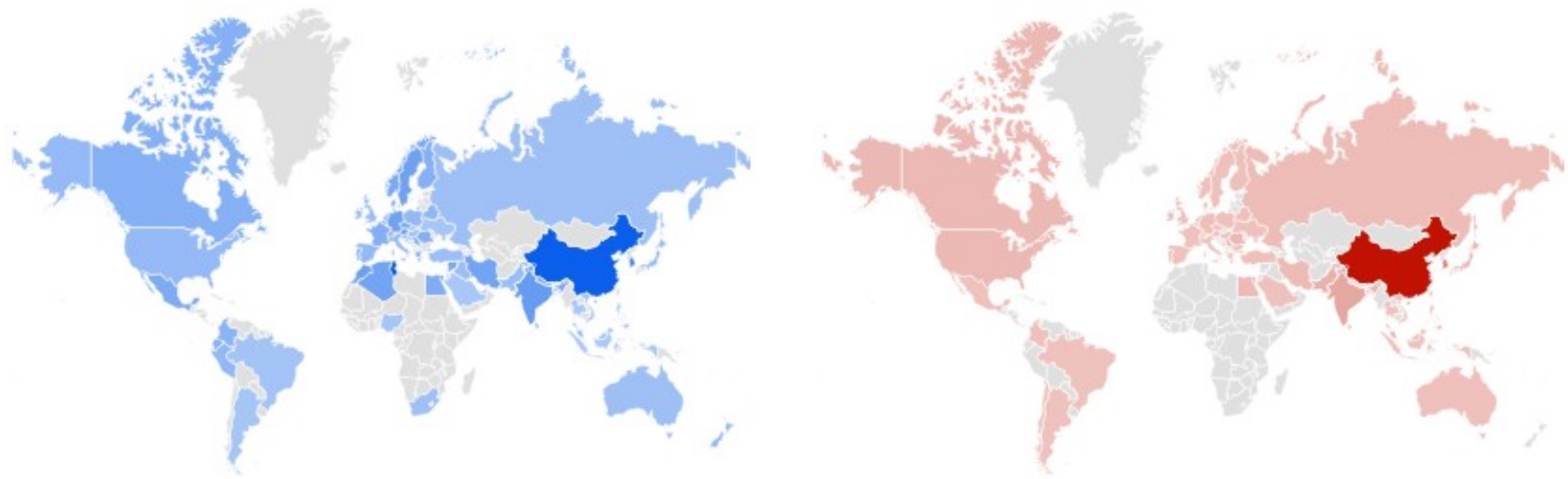


Image credit: Google Trends



VHDL vs. Verilog (2021)



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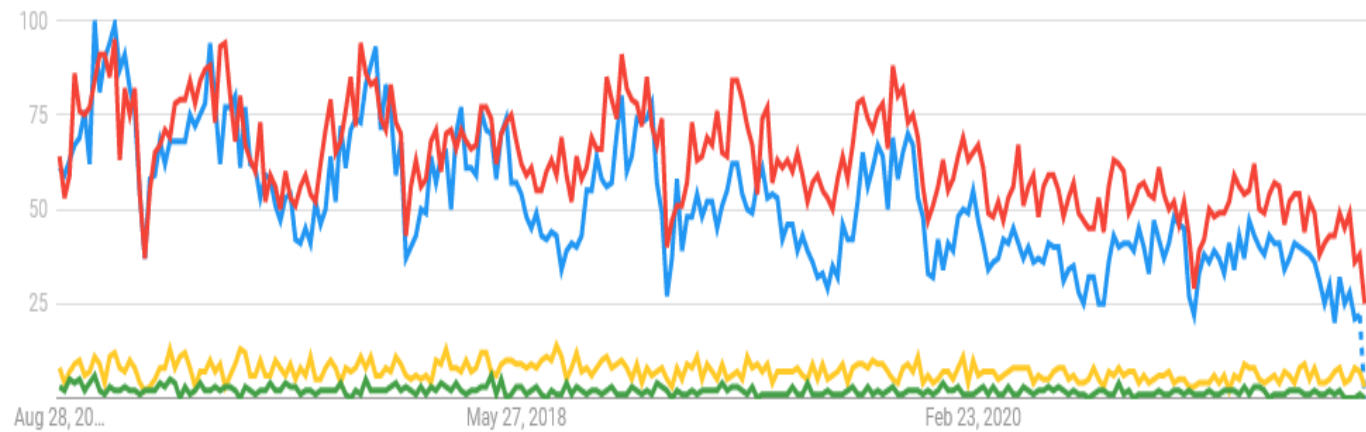
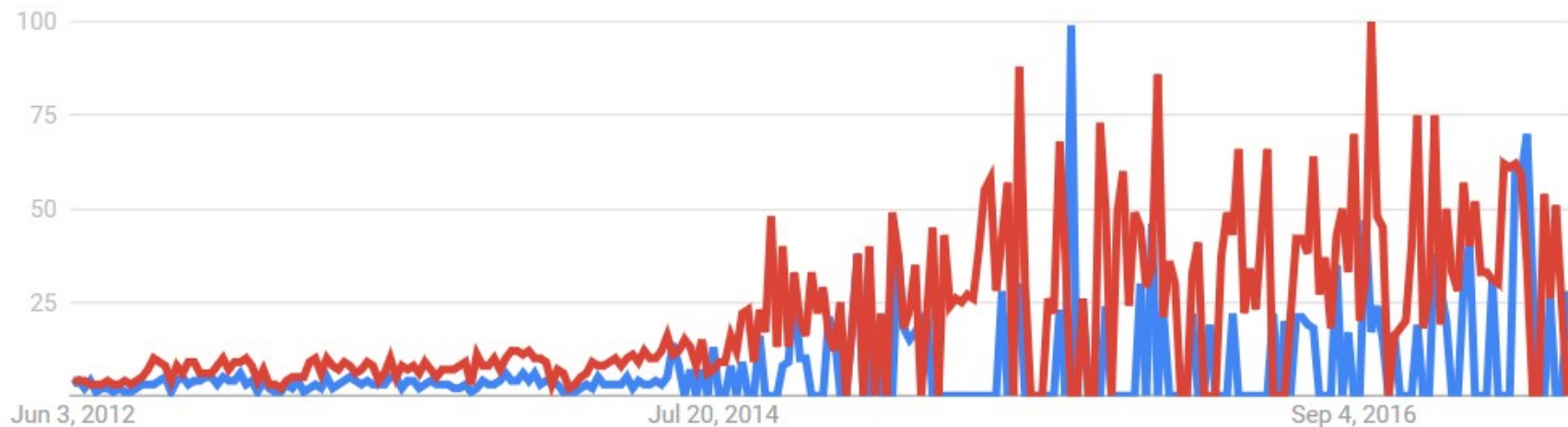


Image credit: Google Trends

VHDL vs. Verilog (China, 2017)



■ VHDL

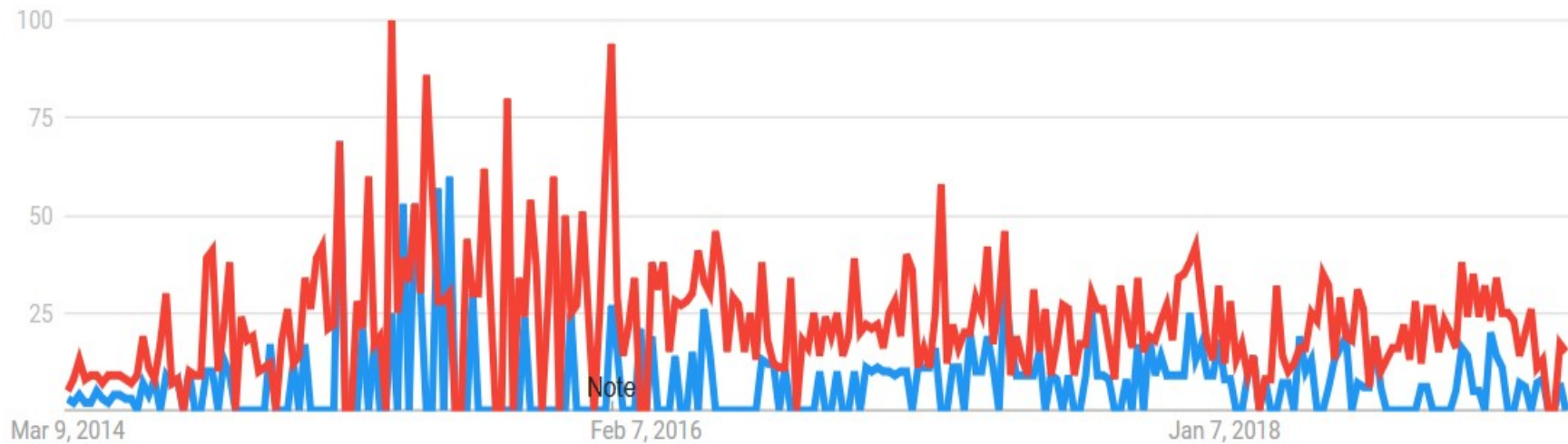
- What happened in 2014?

■ Verilog

- Is this an artefact of China's firewall?

Image credit: Google Trends

VHDL vs. Verilog (China, 2019)



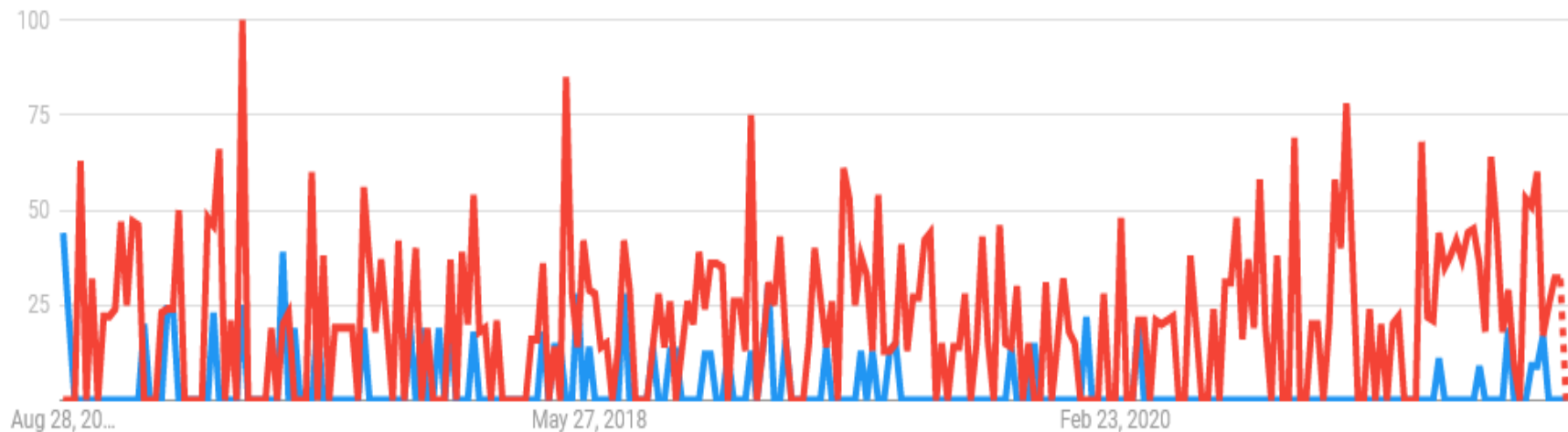
■ VHDL

■ Verilog

- Whatever happened is still going on.
- Is this an artefact of China's firewall?

Image credit: Google Trends

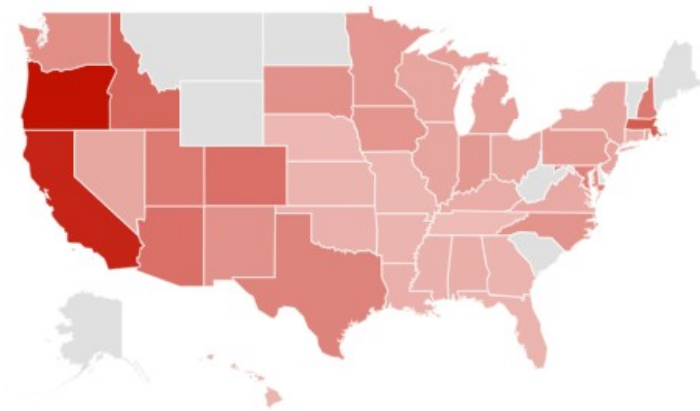
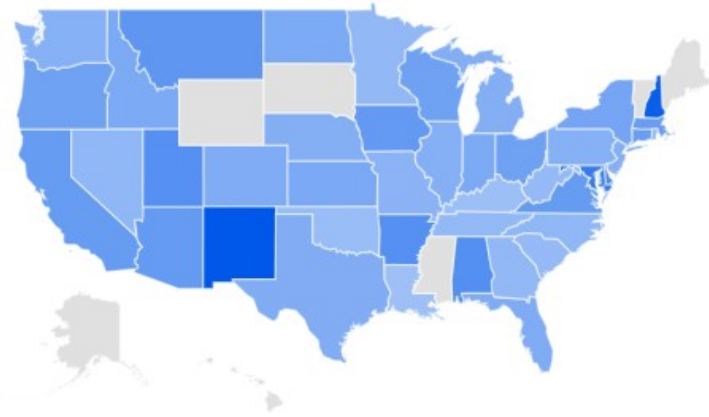
VHDL vs. Verilog (China, 2021)



- VHDL
- Verilog
- Yeah, it's still going on.
- This is an artefact of China's firewall.

Image credit: Google Trends

VHDL vs. Verilog (USA, 2017)



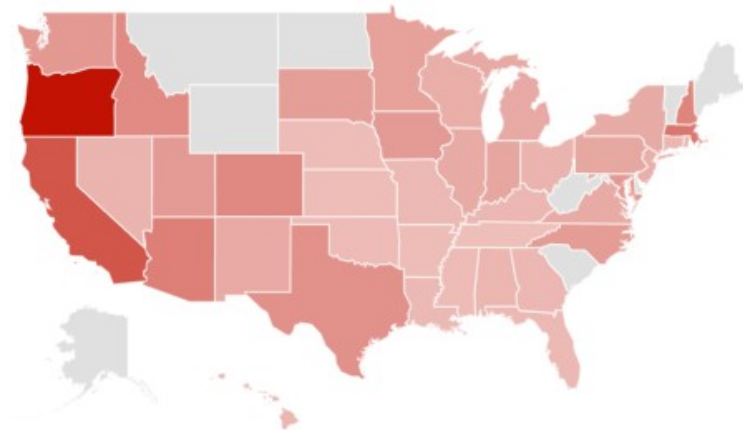
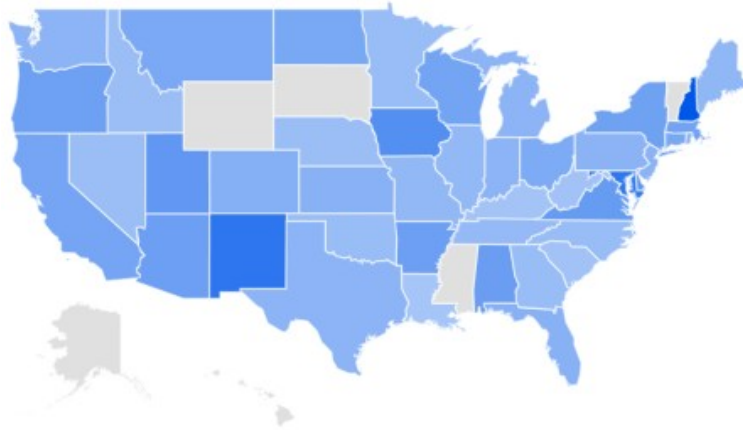
■ VHDL

■ Verilog

- VHDL is more common in New Hampshire and New Mexico (defense/space?)
- Verilog is more common in California and Oregon

Image credit: Google Trends

VHDL vs. Verilog (USA, 2019)



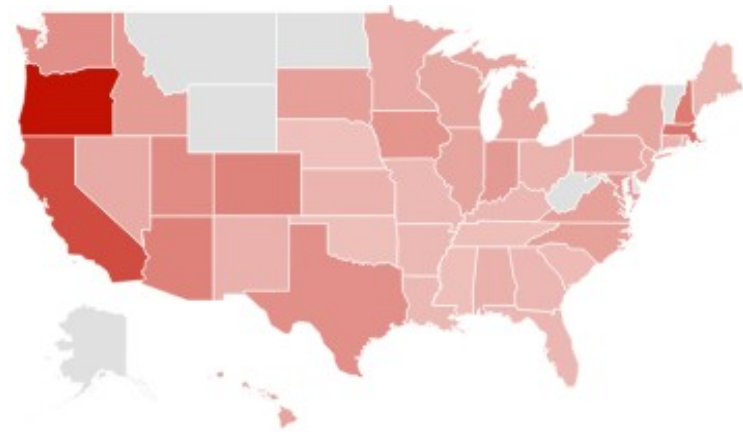
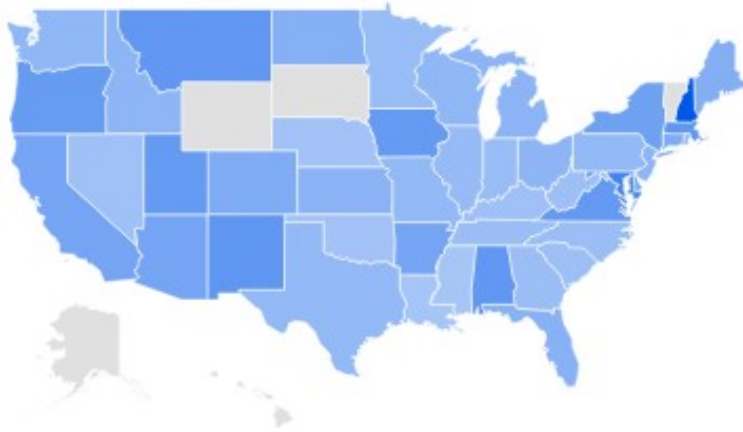
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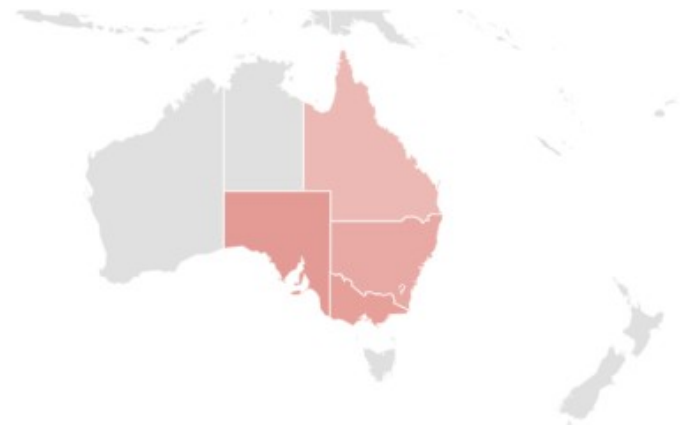


- VHDL
- Verilog

- VHDL is more common in New Hampshire and New Mexico (defense/space?)
- Verilog is more common in California and Oregon

Image credit: Google Trends

VHDL vs. Verilog (Australia, 2017)



- VHDL is more common than Verilog in every state except the ACT
- VHDL is most common in SA
- Verilog is most common in the ACT

■ VHDL
■ Verilog

Image credit: Google Trends

VHDL vs. Verilog (Australia, 2019)



- VHDL
- Verilog

- VHDL is more common than Verilog in every state except the ACT
 - VHDL is most common in SA
 - Verilog is most common in the ACT
- Picking up in Vic

Image credit: Google Trends



VHDL vs. Verilog (Australia, 2021)

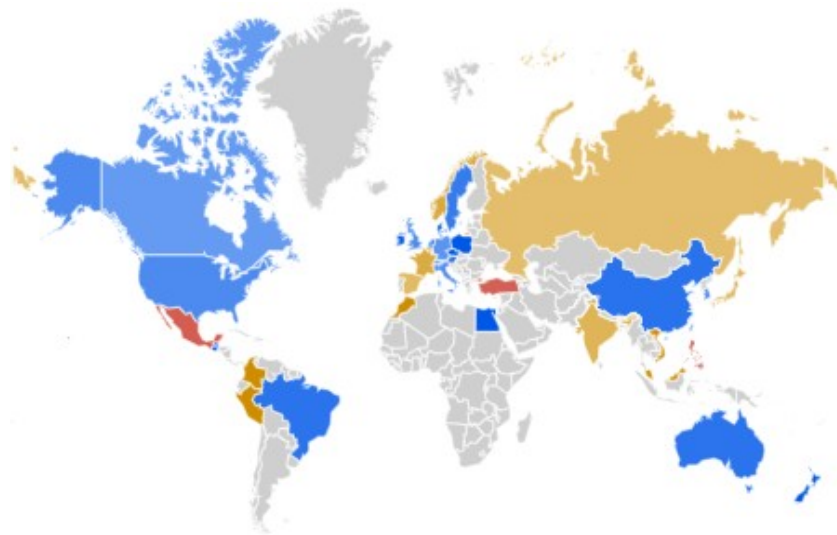


- VHDL
- Verilog

- VHDL is more common than Verilog in every state except the ACT and Victoria
- VHDL is most common in SA

Image credit: Google Trends

RiscV vs. Microblaze/Nios (2019)



- Risc-V is catching on
- ARM is still massive (off this chart)

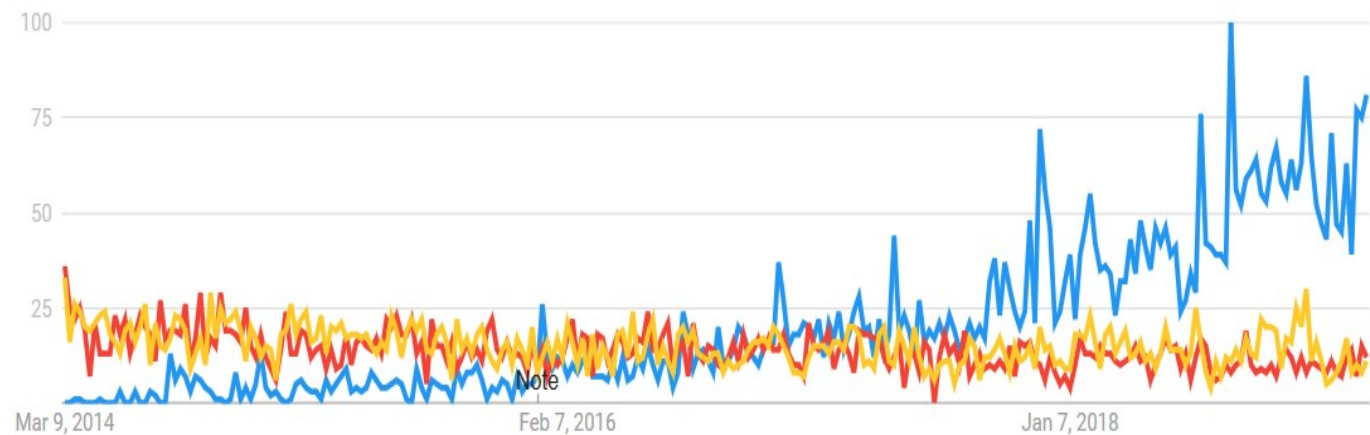
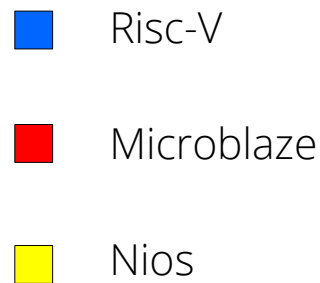


Image credit: Google Trends

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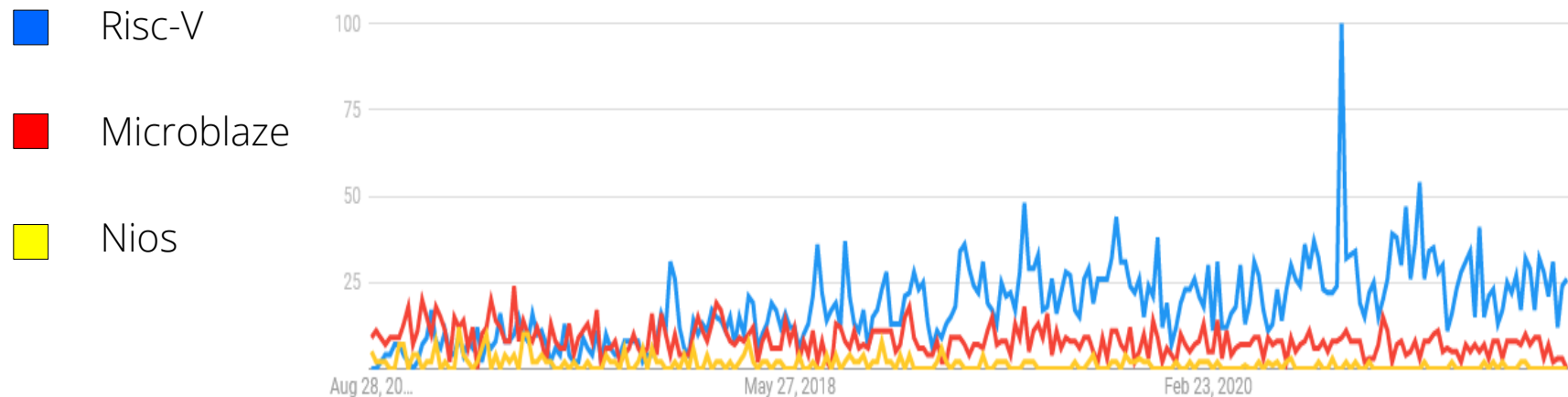


Image credit: Google Trends