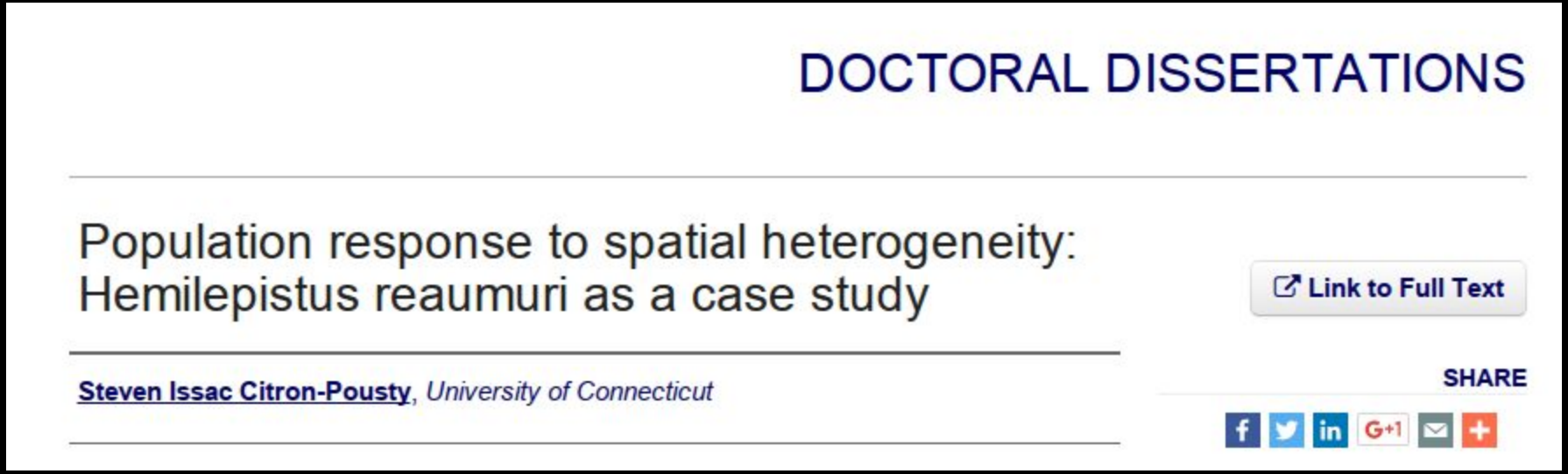
Why can’t tech get past 2nd grade biology

You are fine the way you are

Steven Pousty
OpenShift/Red Hat
@TheSteve0 on Twitter, IRC, SmugMug, Github, Ingress, Instagram, and Skype

http://bit.ly/bio2tech

Dr. Steve to you...



DOCTORAL DISSERTATIONS

Population response to spatial heterogeneity: Hemilepistus reaumuri as a case study

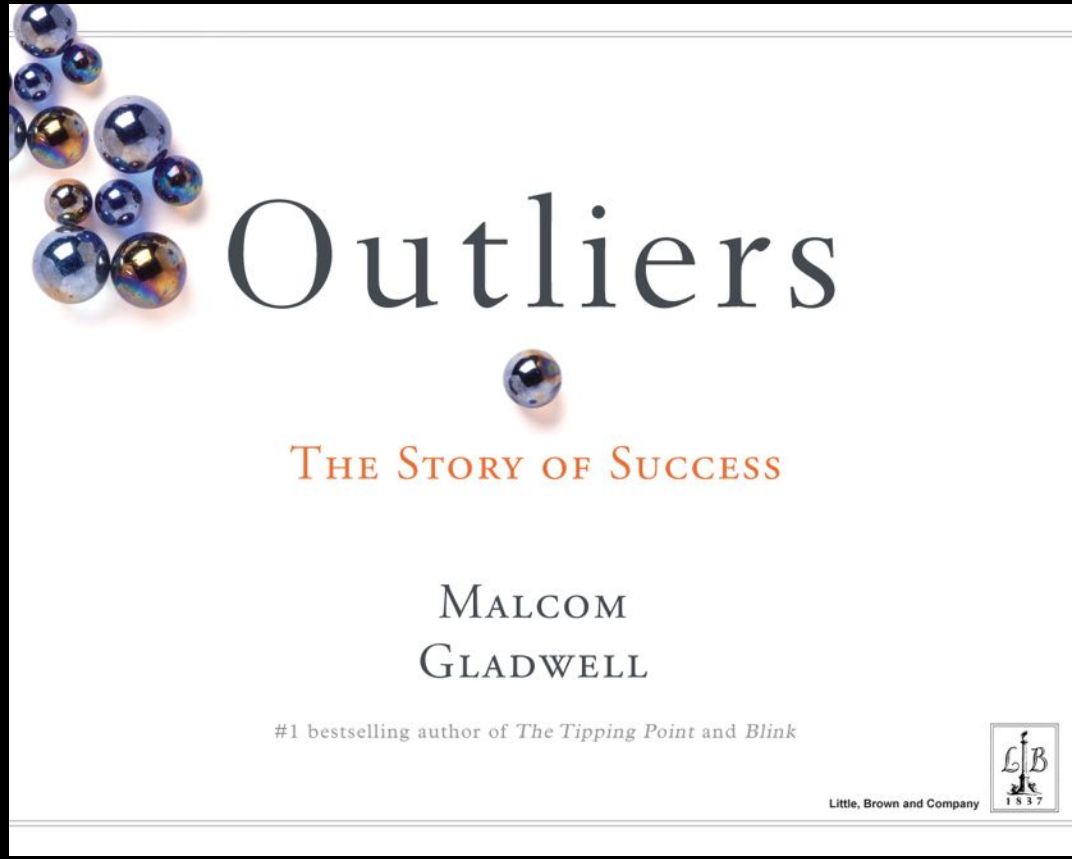
Link to Full Text

Steven Issac Citron-Pousty, *University of Connecticut*

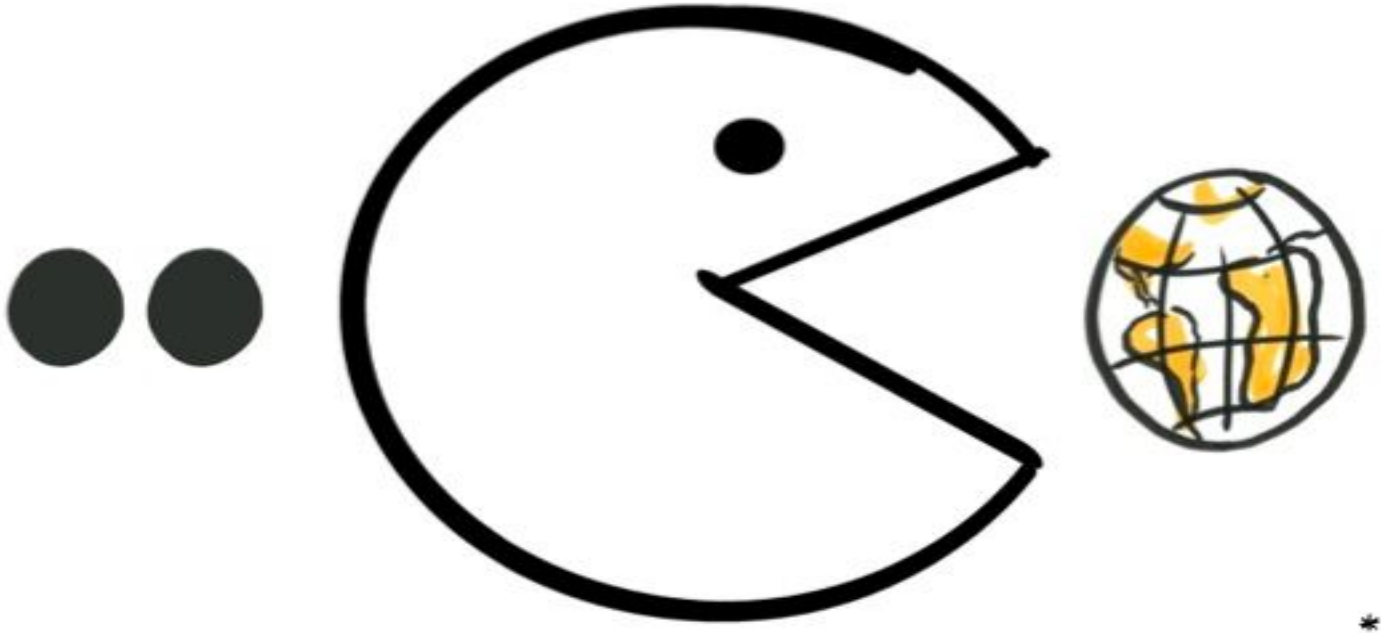
SHARE

CASE ONE

In general, I think software people think they are self-made

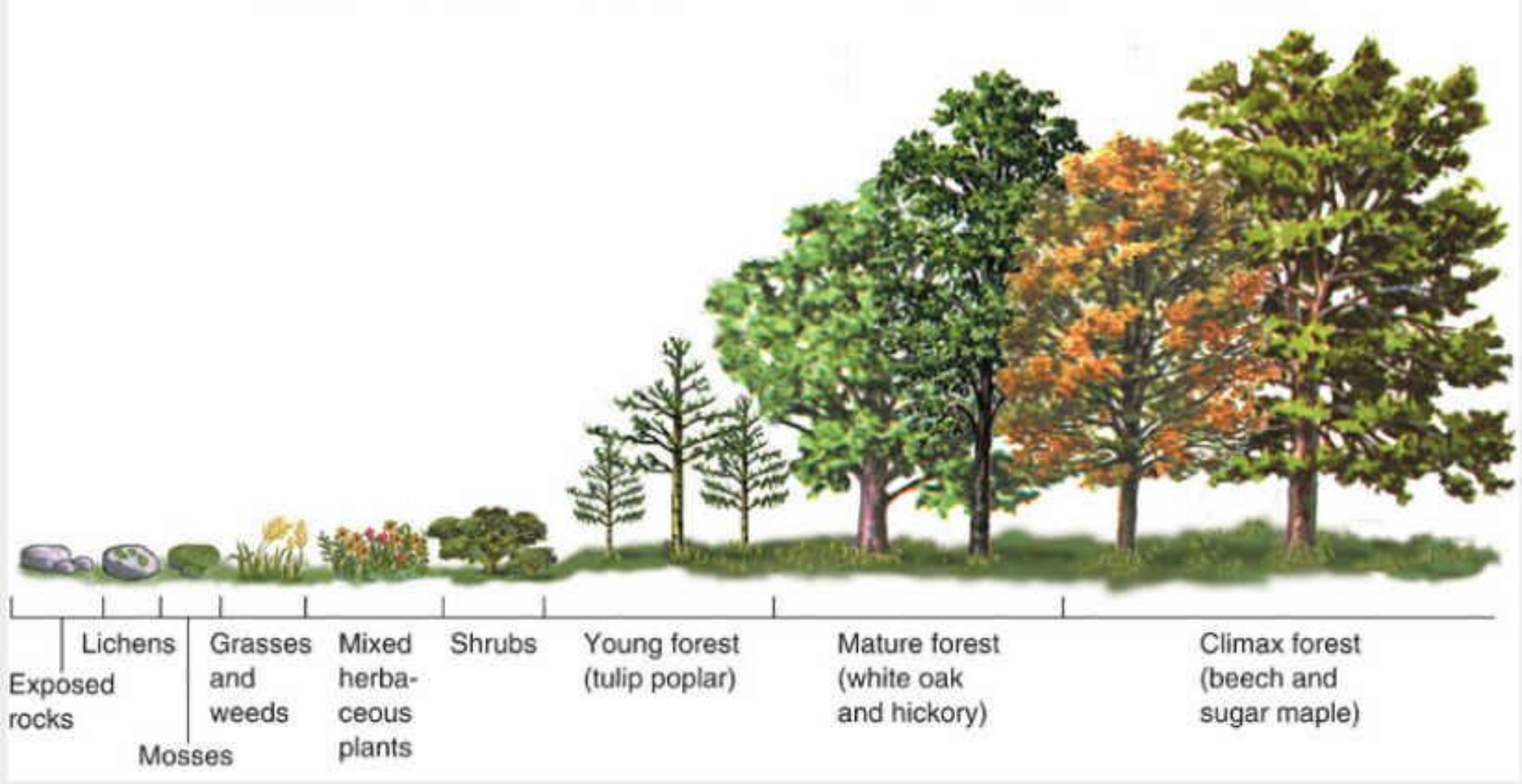


Software is eating up the world*



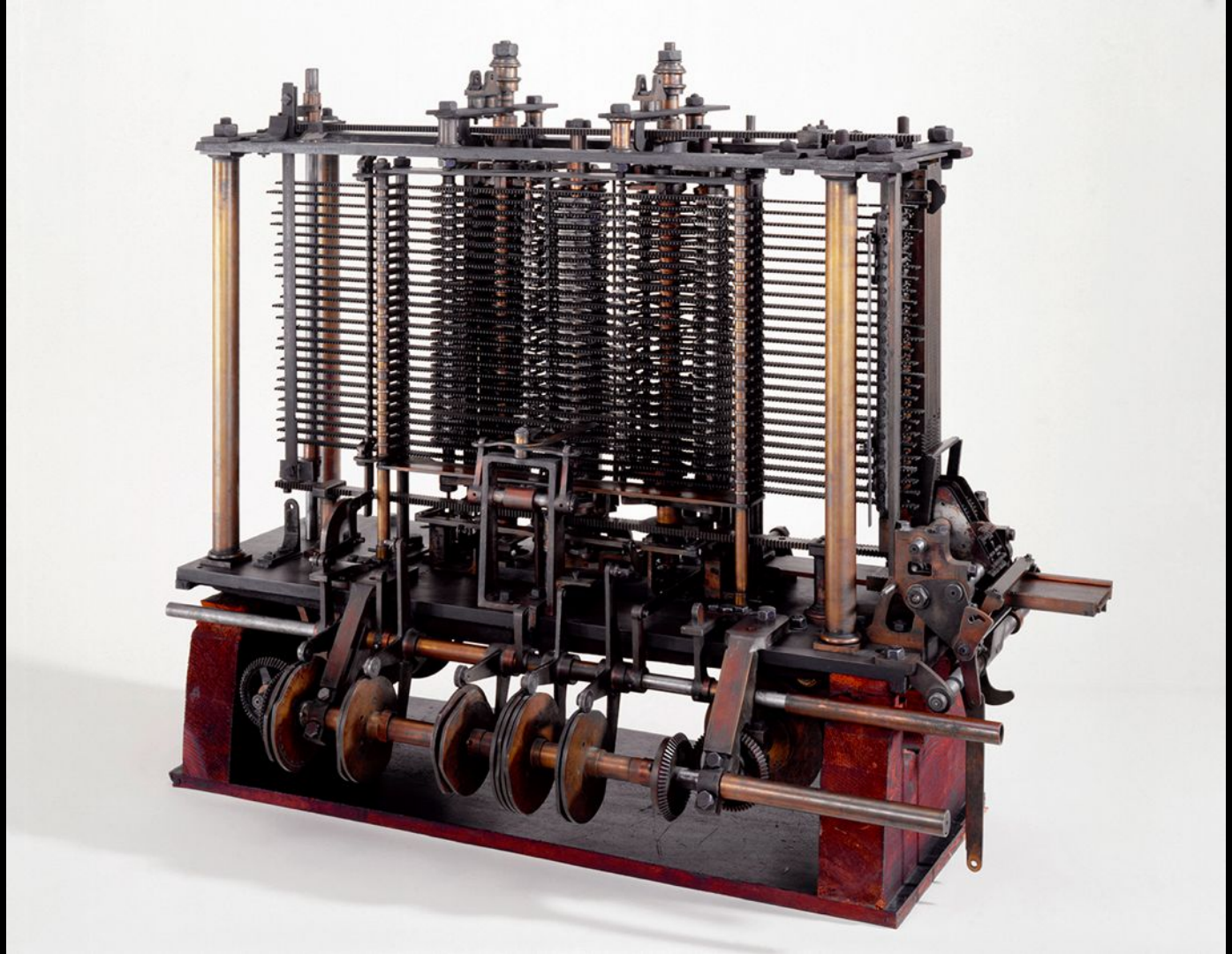
* Marc Andreessen
in Wall Sreet Journal

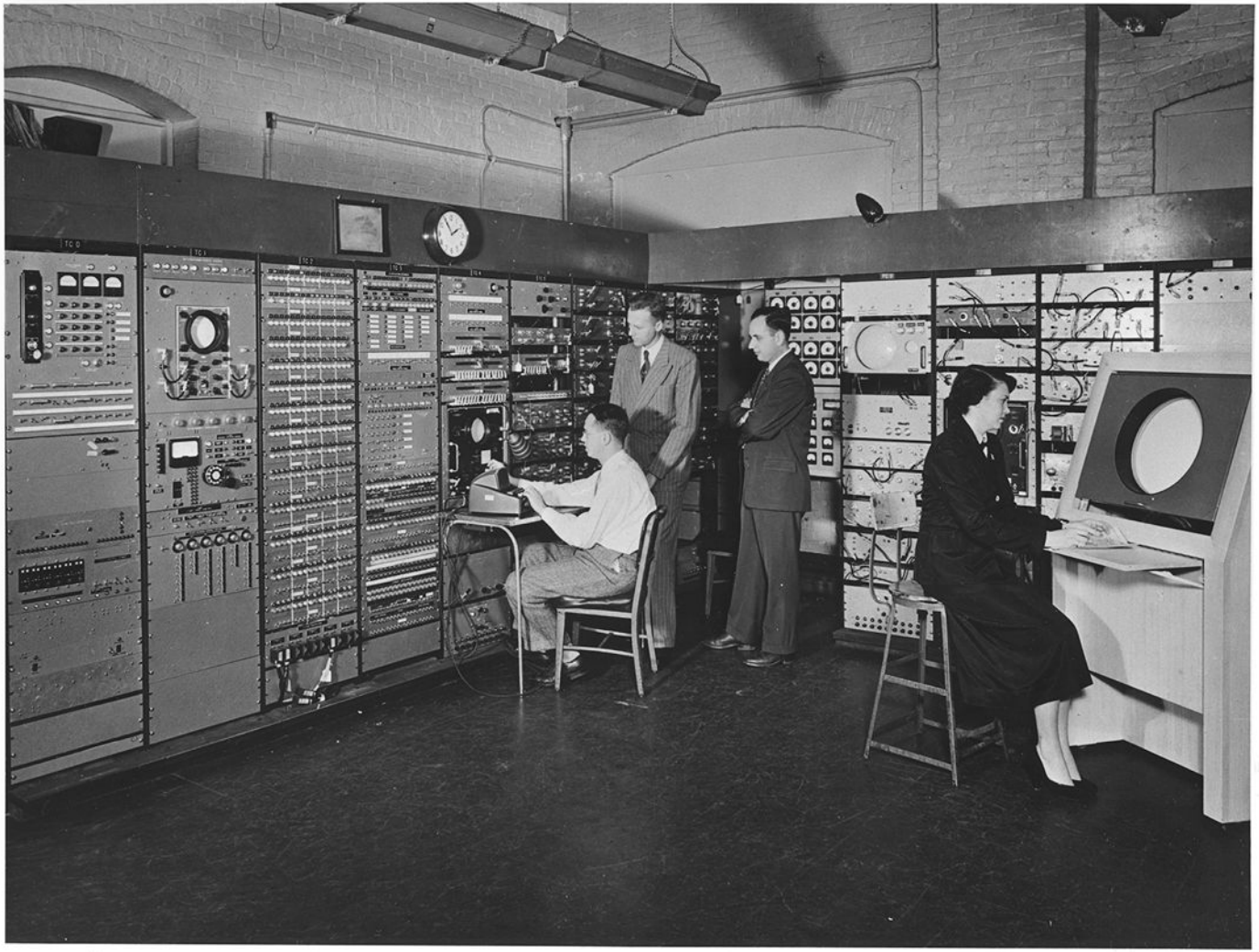
ALTERNATIVE


Exposed rocks
Lichens
Mosses
Grasses and weeds
Mixed herba-ceous plants
Shrubs
Young forest (tulip poplar)
Mature forest (white oak and hickory)
Climax forest (beech and sugar maple)

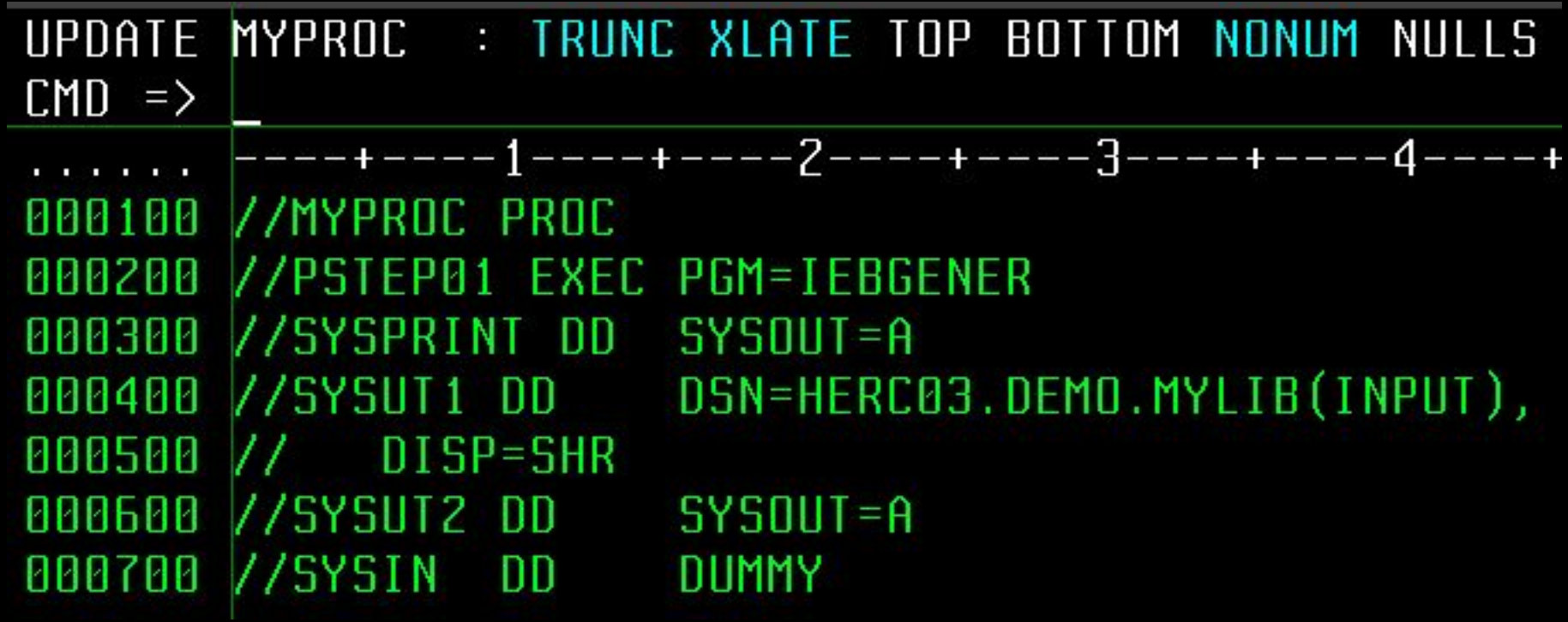
Hardware is the environment/soil

Software is the biological community





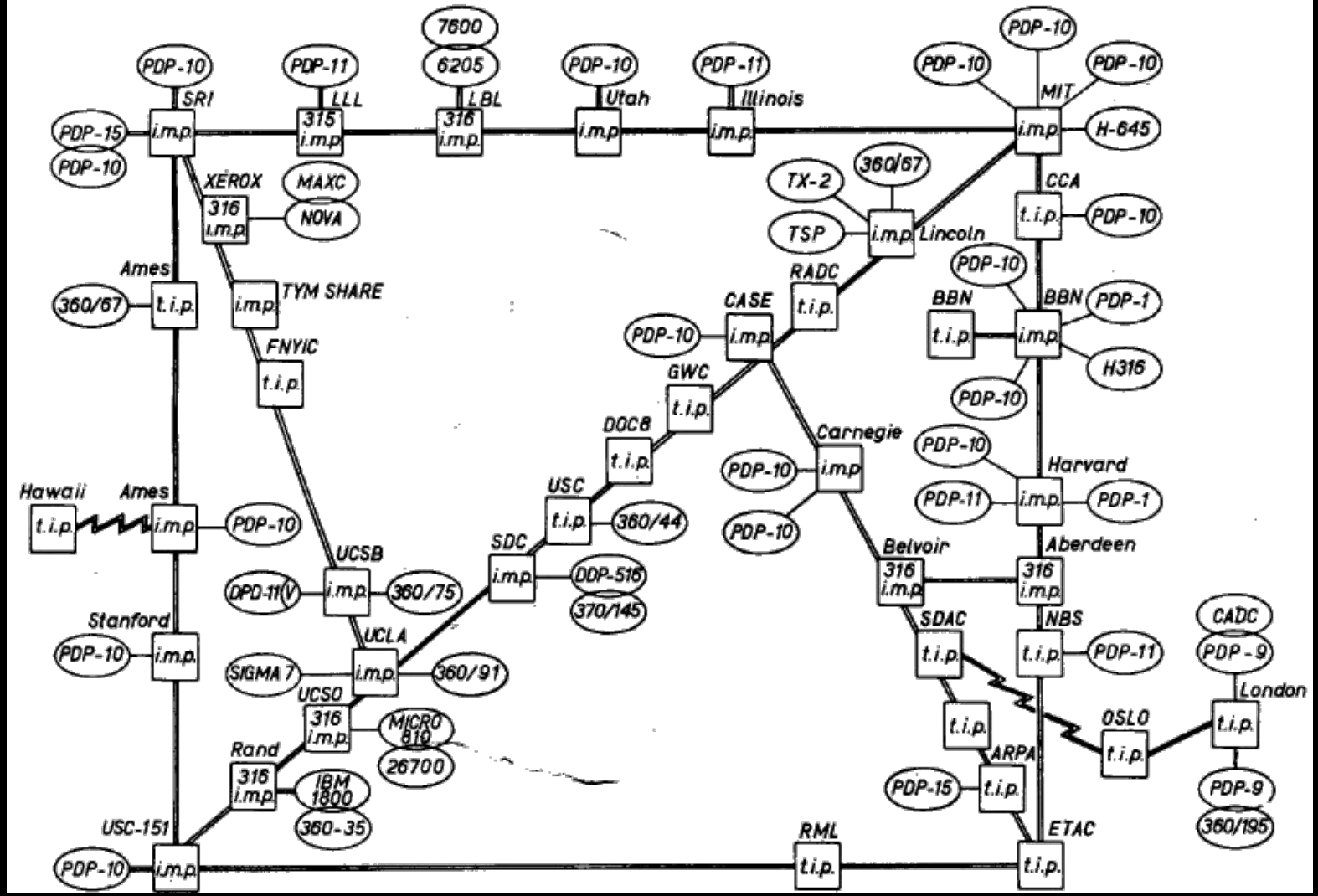
IBM 370
UNIVAC


UPDATE MYPROC : TRUNC XLATE TOP BOTTOM NONUM NULLS
CMD =>
000100 //MYPROC PROC
000200 //PSTEP01 EXEC PGM=IEBGENER
000300 //SYSPRINT DD SYSOUT=A
000400 //SYSUT1 DD DSN=HERC03.DEMO.MYLIB(INPUT),
000500 // DISP=SHR
000600 //SYSUT2 DD SYSOUT=A
000700 //SYSIN DD DUMMY

```
.RUN ADV11

WELCOME TO ADVENTURE!!  WOULD YOU LIKE INSTRUCTIONS?


YES
SOMEWHERE NEARBY IS COLOSSAL CAVE, WHERE OTHERS HAVE FOUND
FORTUNES IN TREASURE AND GOLD, THOUGH IT IS RUMORED
THAT SOME WHO ENTER ARE NEVER SEEN AGAIN. MAGIC IS SAID
TO WORK IN THE CAVE.  I WILL BE YOUR EYES AND HANDS. DIRECT
ME WITH COMMANDS OF 1 OR 2 WORDS.
(ERRORS, SUGGESTIONS, COMPLAINTS TO CROWTHER)
(IF STUCK TYPE HELP FOR SOME HINTS)


YOU ARE STANDING AT THE END OF A ROAD BEFORE A SMALL BRICK
BUILDING . AROUND YOU IS A FOREST. A SMALL
STREAM FLOWS OUT OF THE BUILDING AND DOWN A GULLY.


GO IN
YOU ARE INSIDE A BUILDING, A WELL HOUSE FOR A LARGE SPRING.


THERE ARE SOME KEYS ON THE GROUND HERE.


THERE IS A SHINY BRASS LAMP NEARBY.


THERE IS FOOD HERE.


THERE IS A BOTTLE OF WATER HERE.
```

It is not one changing without influence from the other

cisco Systems
AGS
X1539.98


PDP-10
SRI
i.m.p.
PDP-15
PDP-10
XEROX
316
i.m.p.
MAXC
NOVA
Ames
360/67
t.i.p.
i.m.p.
TYM SHARE
FNYIC
t.i.p.
Hawaii
t.i.p.
Ames
i.m.p.
PDP-10
Stanford
PDP-10
i.m.p.
USC-151
PDP-10
i.m.p.
PDP-11
LLL
315
i.m.p.
7600
6205
LBL
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i.m.p.
PDP-10
Utah
i.m.p.
PDP-11
Illinois
i.m.p.
UCSB
DPD-11(V)
i.m.p.
360/75
UCLA
SIGMA 7
i.m.p.
360/91
UCSD
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i.m.p.
MICRO 810
26700
Rand
316
i.m.p.
IBM 1800
360-35
SDC
i.m.p.
DDP-516
370/145
USC
t.i.p.
360/44
DOC8
t.i.p.
GWC
t.i.p.
CASE
i.m.p.
PDP-10
RADC
t.i.p.
TX-2
TSP
360/67
i.m.p.
Lincoln
Carnegie
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PDP-10
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PDP-10
PDP-10
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H-645
CCA
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PDP-10
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BBN
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H316
PDP-10
PDP-10
Harvard
PDP-11
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PDP-1
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Aberdeen
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SDAC
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NBS
t.i.p.
PDP-11
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OSLO
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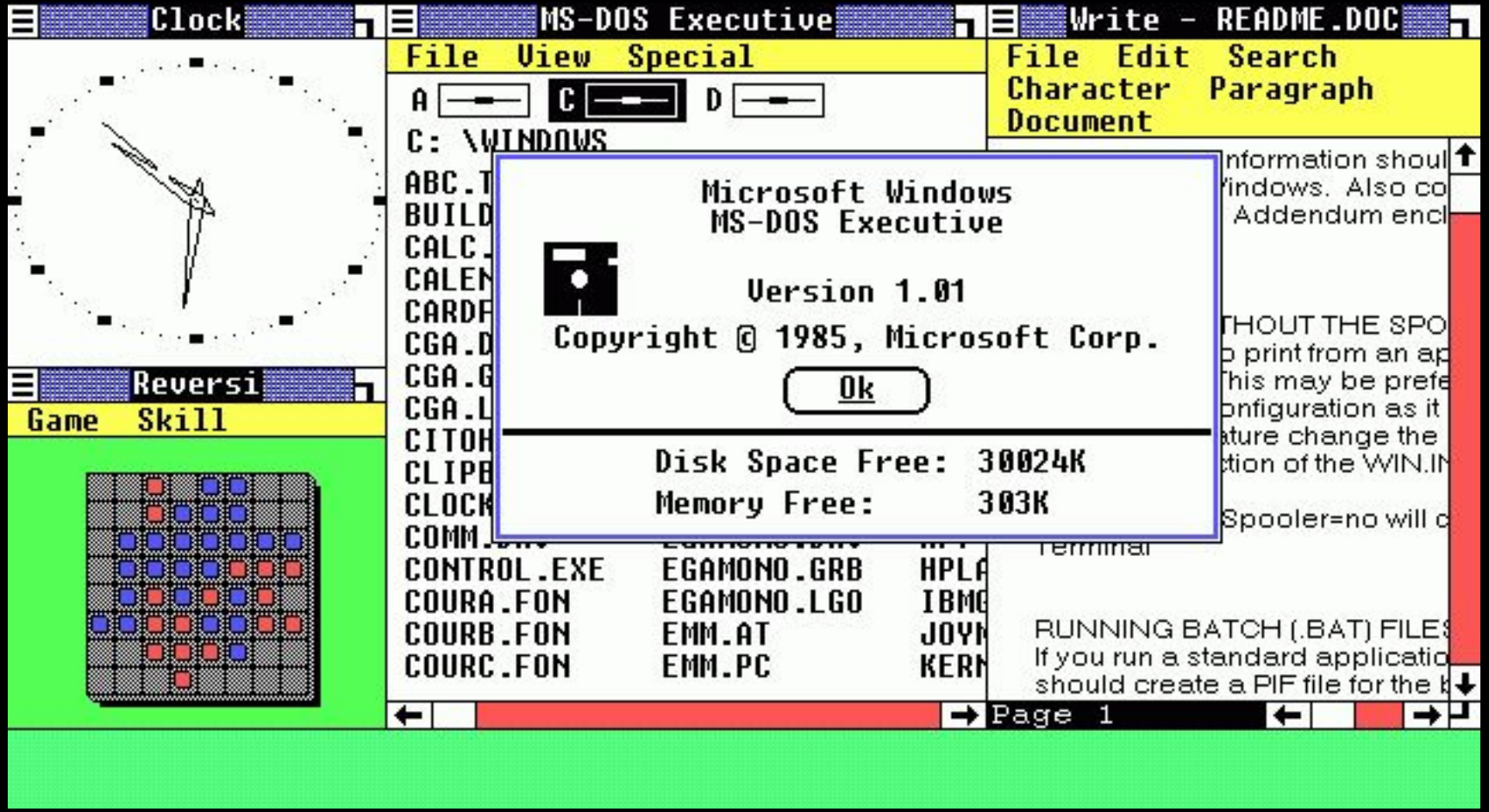
ARPA
PDP-15
t.i.p.
ETAC
t.i.p.
CADC
PDP-9
London
t.i.p.
PDP-9
360/195

Introducing the Desktop
HEWLETT PACKARD A4033A

DATA·phone
DATA·phone

IBM
IBM
IBM
IBM

MAIN MENU
System Commands
"P" to Pause
(SPACE) to abort
CTRL-O On-Line Help
CTRL-T Display System Time
J Join Conference(if avail)
W Extended Commands Menu
File T ransfers
. On-line Programs (Doors)
D efaults G -files
Message Subs
* List Available Subs N ew Message scan
R emove a Message Q N-Scan Current Sub
P ost a Message S can Message Titles
>,+ Advance one Sub # Z Continuous N-Scan
<,- Retreat one Sub # Goto Sub # Pressed
Electronic Mail
F eedback to Sysop E -Mail a User
M ailbox scan K ill E-mail You sent
Misc Commands
A uto-Message
Log O ff U ser List C hat with Sysop System I nfo
Y our info B BS List V oting Booth L ast Callers Today
X Toggle Expert/Novice


Clock
MS-DOS Executive
Write - README.DOC
File View Special
A C D
C: \WINDOWS
Microsoft Windows
MS-DOS Executive
Version 1.01
Copyright © 1985, Microsoft Corp.
Ok
Disk Space Free: 30024K
Memory Free: 303K
CONTROL.EXE
COURA.FON
COURB.FON
COURC.FON
EGAMONO.GRB
EGAMONO.LGO
EMM.AT
EMM.PC
File Edit Search
Character Paragraph
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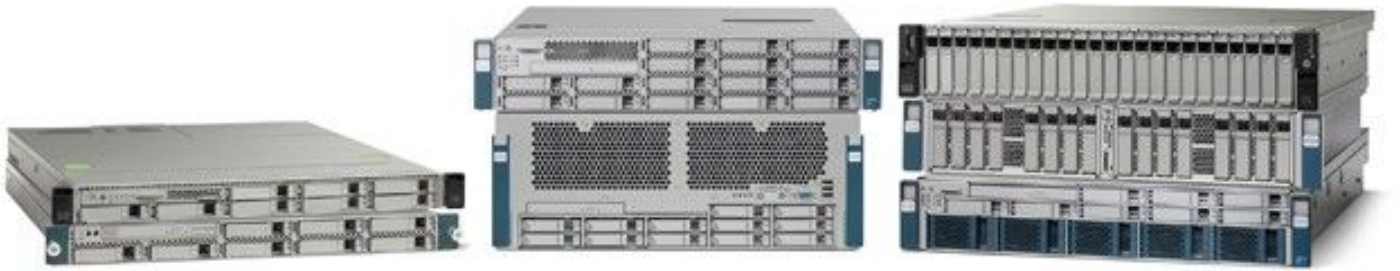
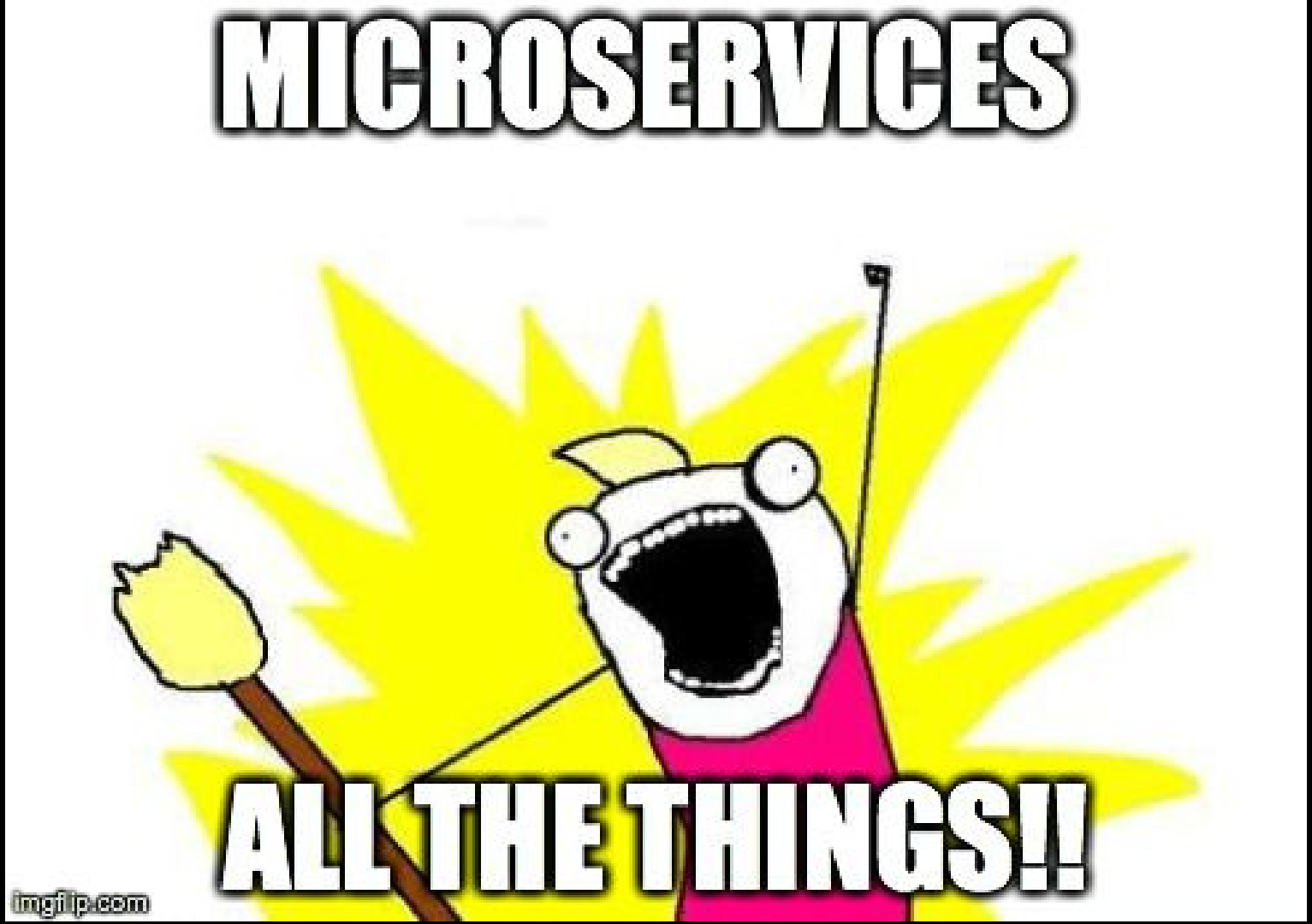
intel

cisco




MICROSERVICES
ALL THE THINGS!!
imgflip.com

Microservices?

The combination of hardware **AND** software succession have created a new community– it is neither right or wrong – it just is. Does this community match the needs of your company – do you have the proper environment for it.

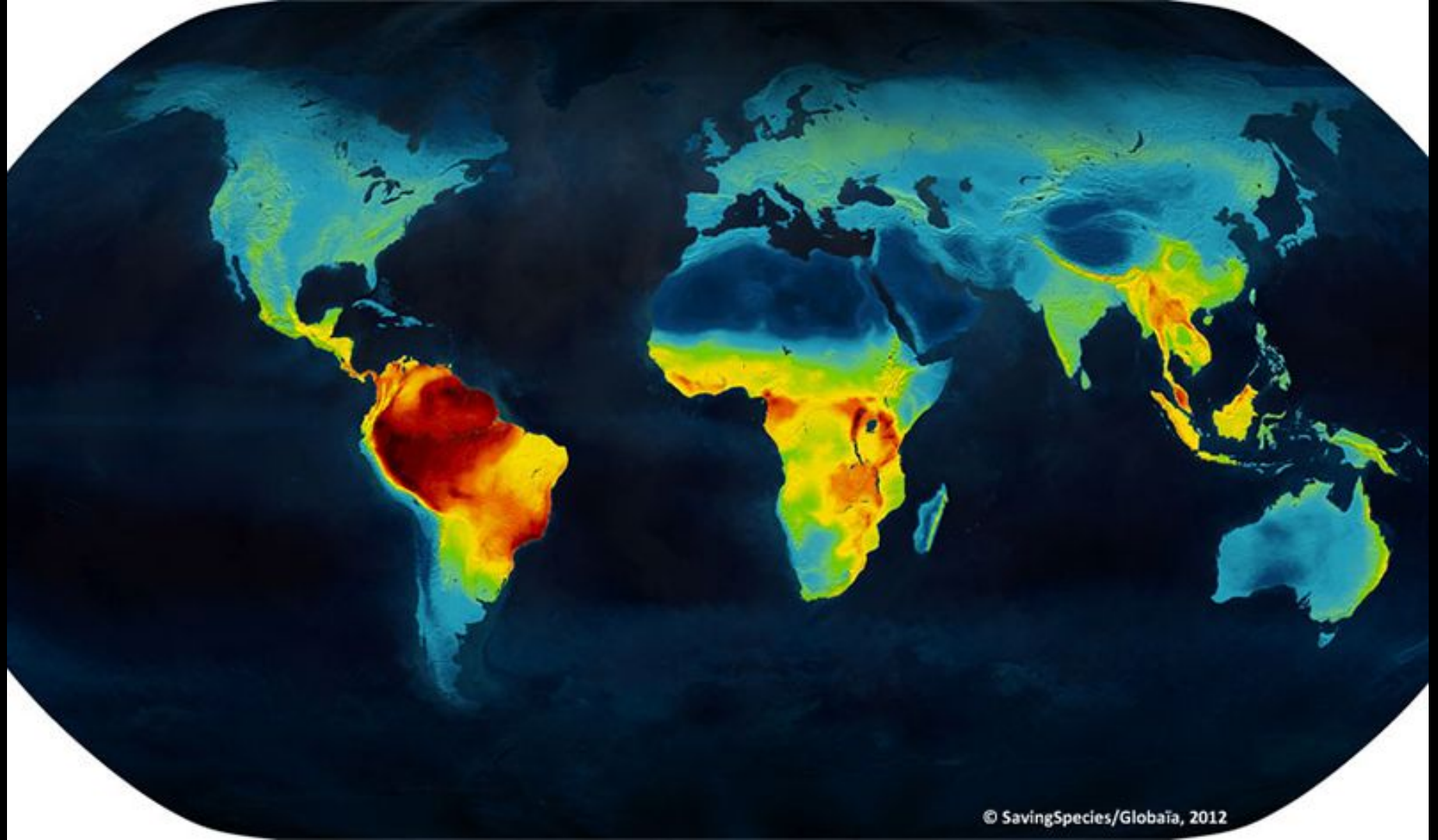
Neither Linear nor simple pairs

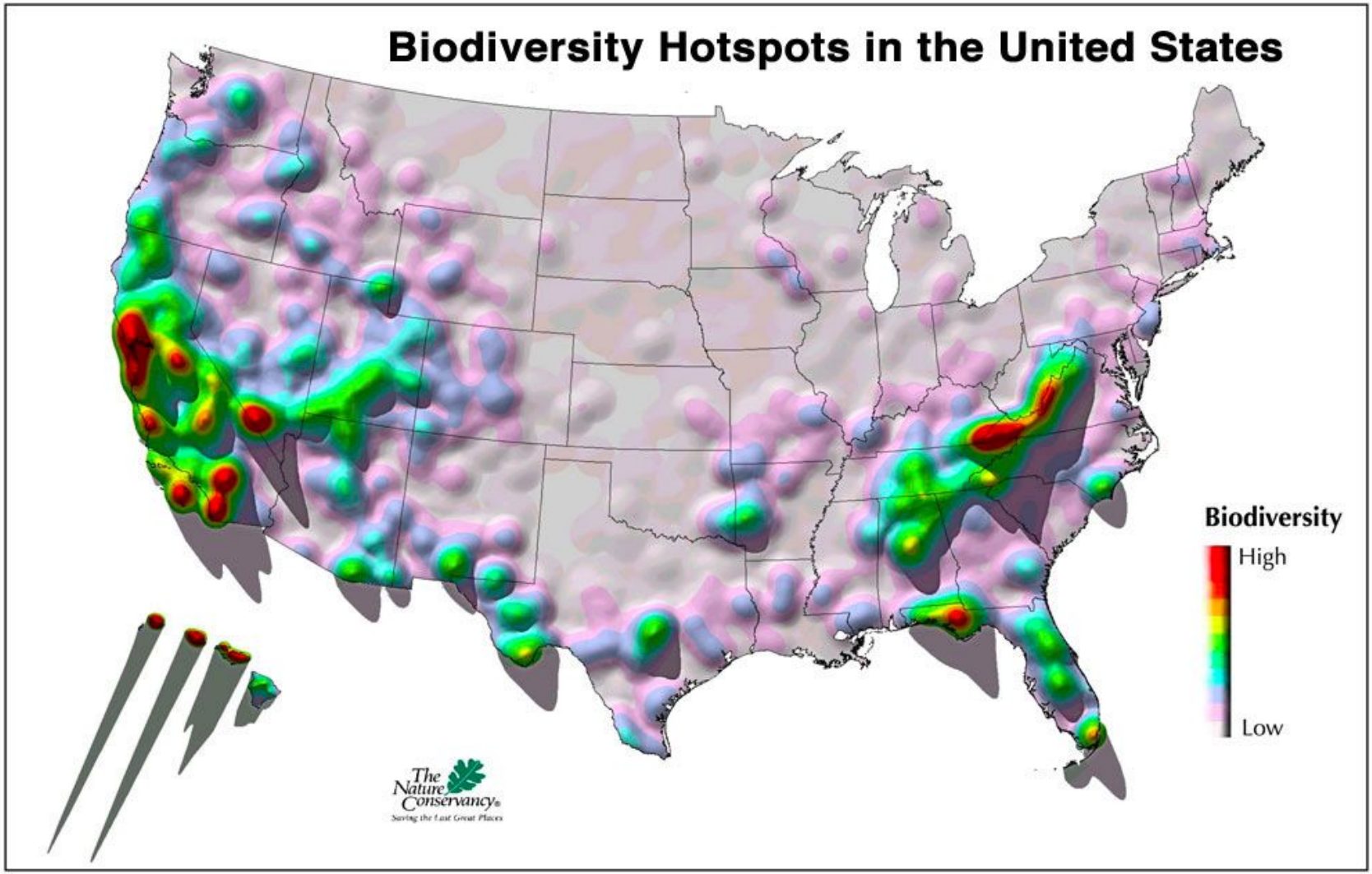
SDN

Pull it together

We find ourselves getting more and more diversity in options

This will continue.

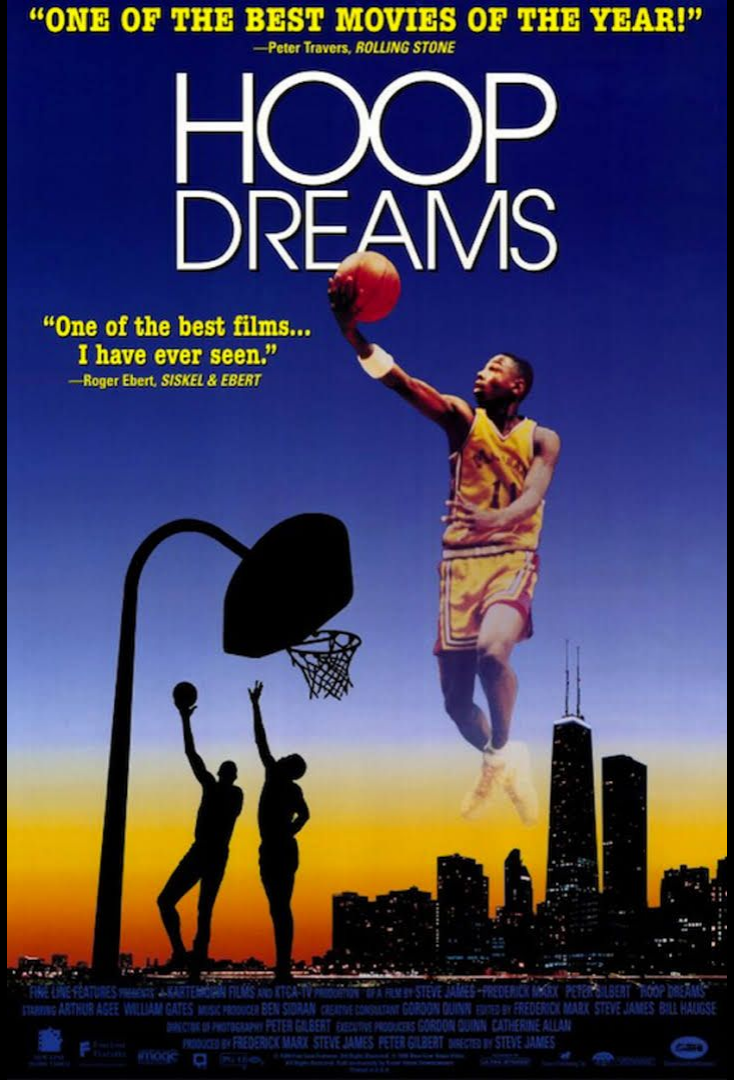

© SavingSpecies/Globaïa, 2012


Biodiversity Hotspots in the United States
Biodiversity
High
Low
The Nature Conservancy
Saving the Last Great Places

We don’t all have to be rainforests

CASE TWO

Google/Facebook Scale Envy


"ONE OF THE BEST MOVIES OF THE YEAR!"
—Peter Travers, ROLLING STONE
HOOP DREAMS
"One of the best films... I have ever seen."
—Roger Ebert, SISKEL & EBERT
FINE LINE FEATURES presents
STARRING ARTHUR AGEE WILLIAM GATES
DIRECTOR OF PHOTOGRAPHY PETER GILBERT
PRODUCED BY FREDERICK MARX STEVE JAMES PETER GILBERT
DIRECTED BY STEVE JAMES

Companies 250 - 2500 employees

$500K[1]

43%[1]

119 people[2]

1 SpiceWorks 2016 IT survey 2 ZDnet report of 2014 Spicework survey

Google

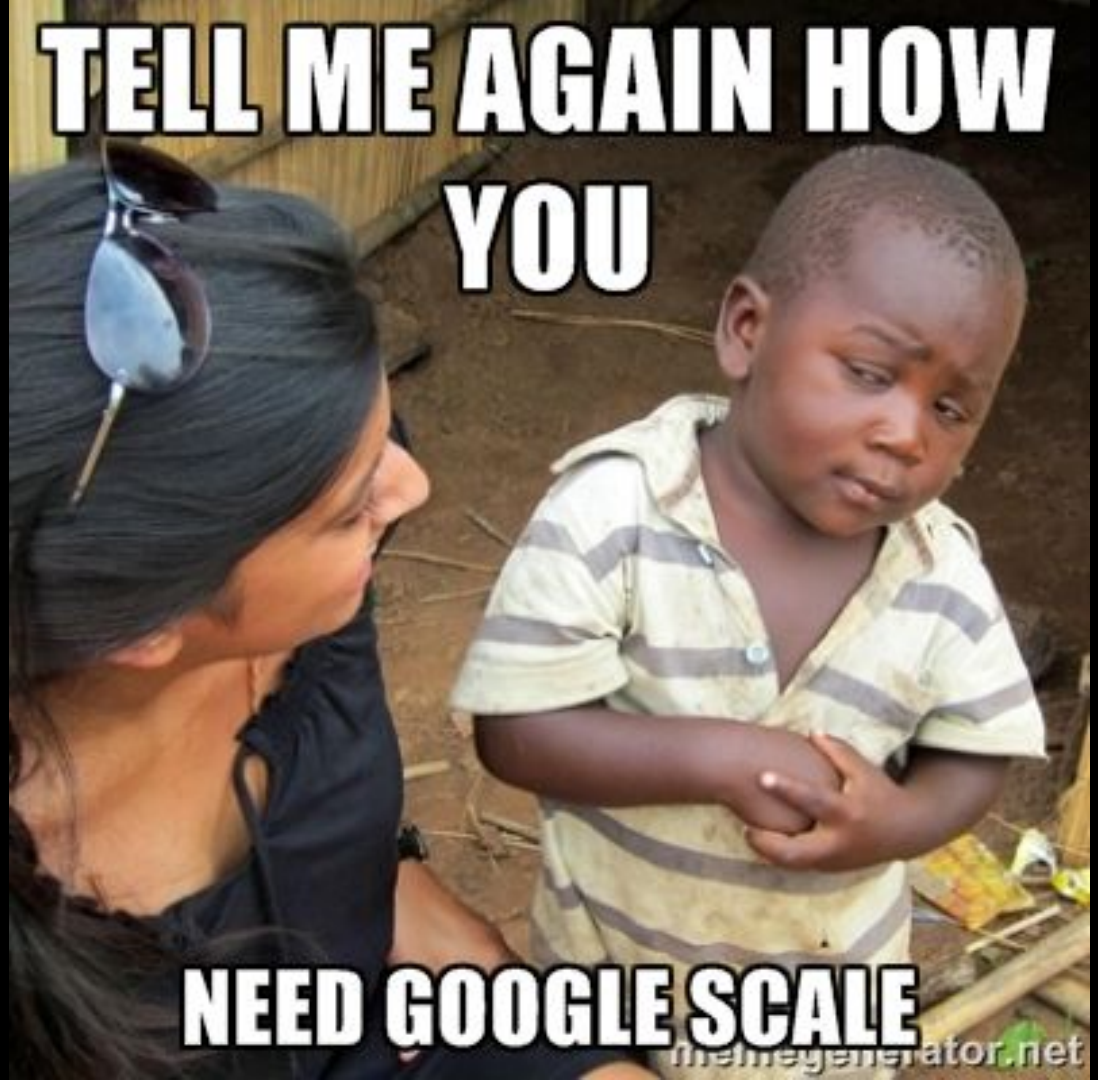
2 Billion[1]

25,000[1]

Unpatented Custom Chip[2]

230 Billion[2]

1. http://bgr.com/2015/09/18/size-of-google-source-code-lines/
2. http://www.forbes.com/sites/quentinhardy/2011/06/11/google-scale-changes-everything/


TELL ME AGAIN HOW
YOU
NEED GOOGLE SCALE
memegenerator.net

There is a lot of...
Fun
&
$
in all the places below #1

Just set your expectations

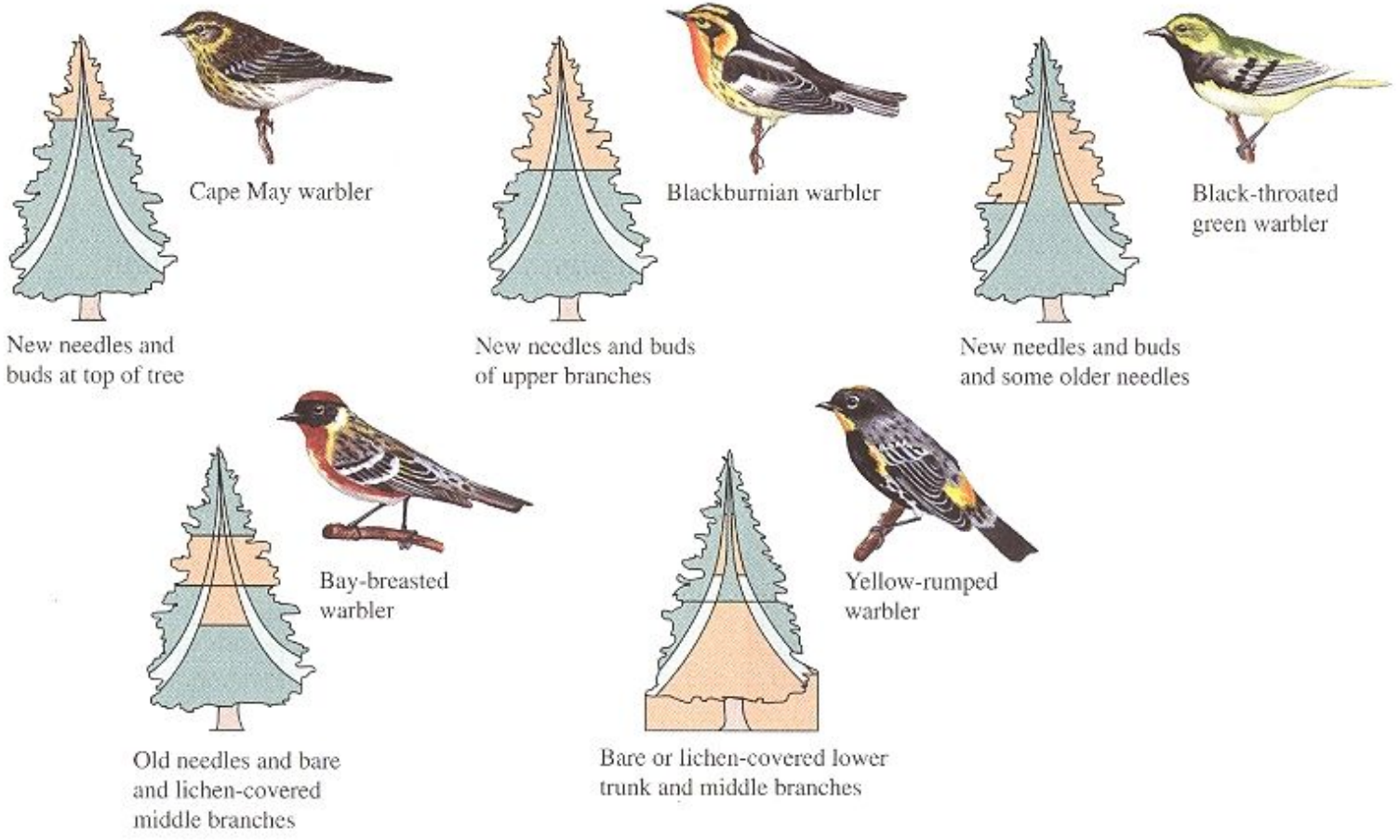


FIGURE 5.19 **Niche Specialization** Although all of these warblers have similar feeding habits, the intensity of competition is reduced because they search for insects on different parts of the tree.

The question is not:

How do I become Google Scale?

The question is:

How do I get to work with fulfilling technology that makes my job better

The world is not only:

Competition

Predatory-Prey

but also

Successional Dynamics

Niche Differentiation

...

Take homes:

You are not eating nor do you need to be eating the world

You don’t need to be Google scale

You need to be using

appropriate

and

fulfilling

technology for your actual work

Fin

Would love more discussion @TheSteve0

http://bit.ly/bio2tech