

Encode x Urbit  
Hackathon 2022

# Urbit as a Platform

N E Davis  
~lagrev-nocfep



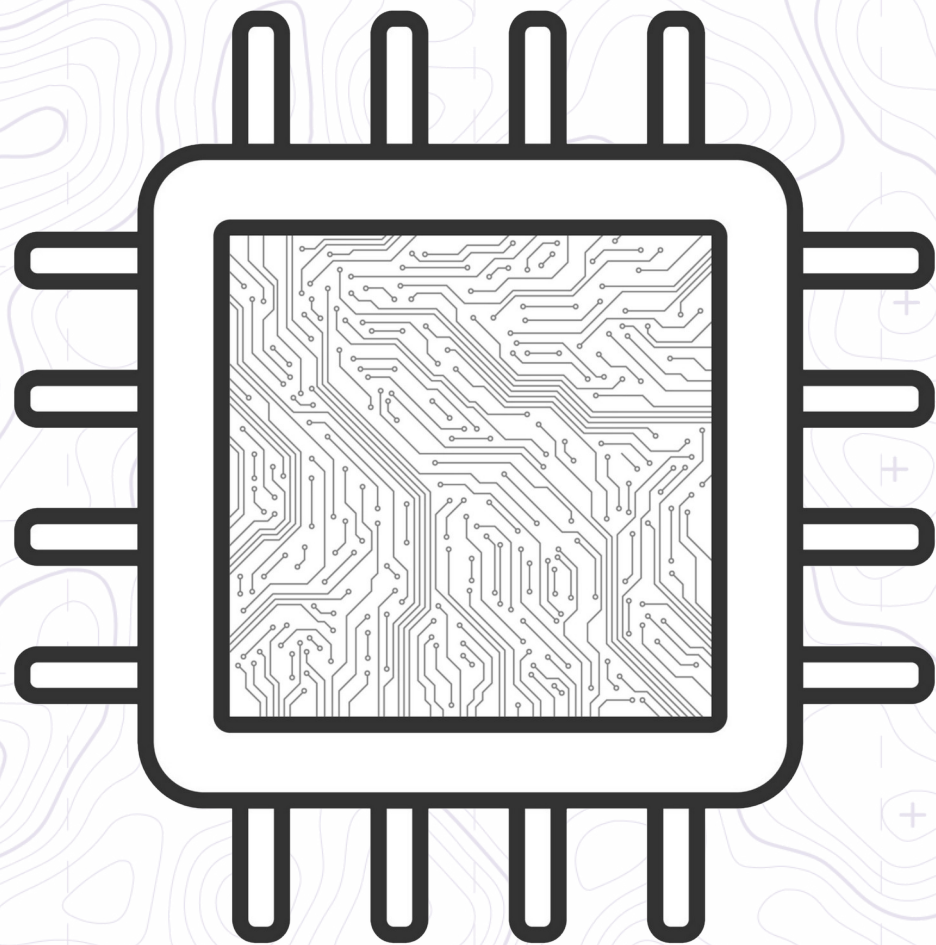
- \*Cryptographic identity (Urbit ID/Azimuth)

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- \*Associated off-chain state as persistent database (Urbit OS/Arvo)

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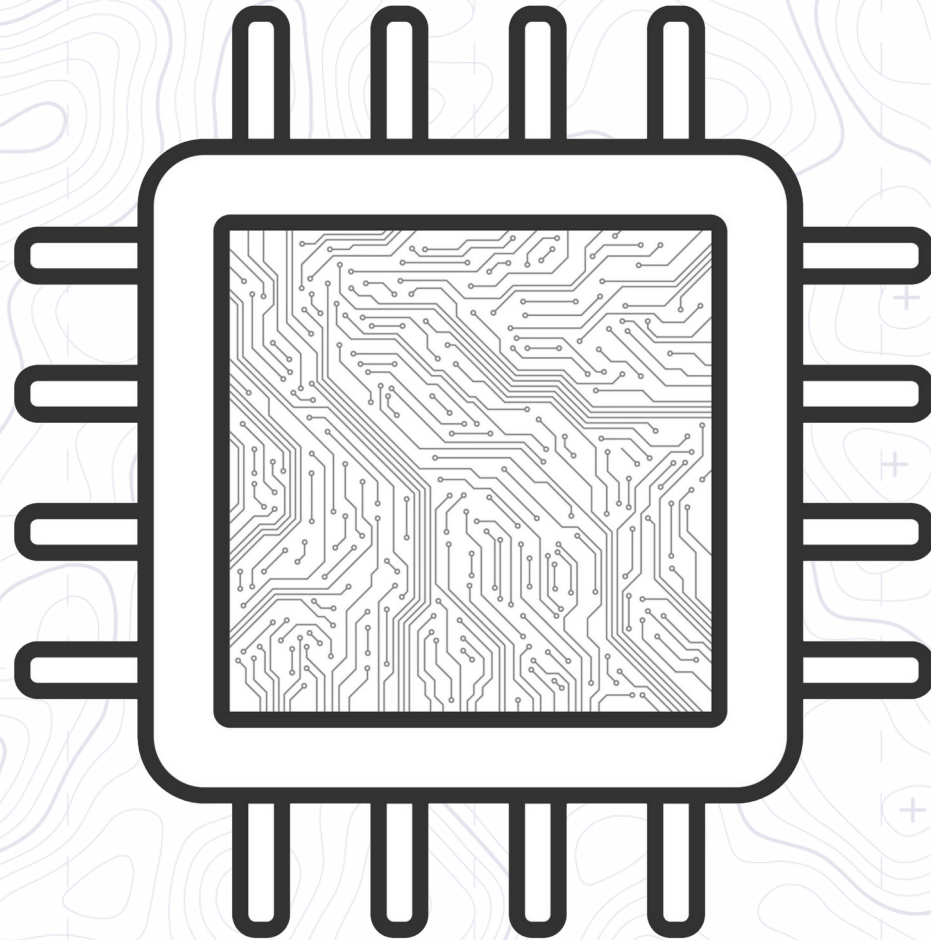
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- \* HTTP interface



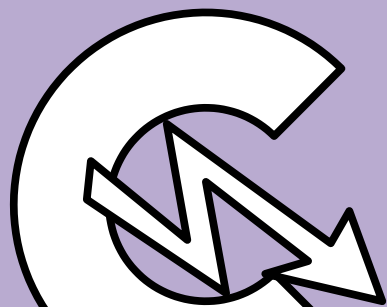


8088  
80286  
80386  
80486  
Pentium  
IA64

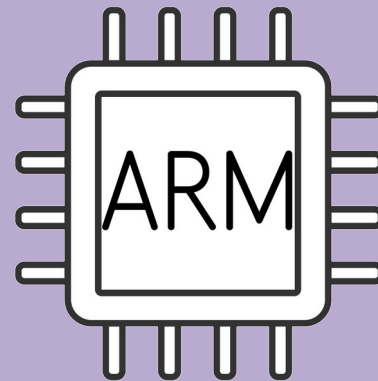
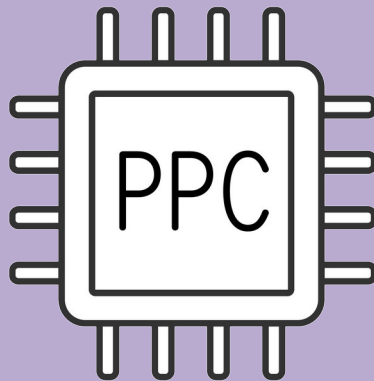
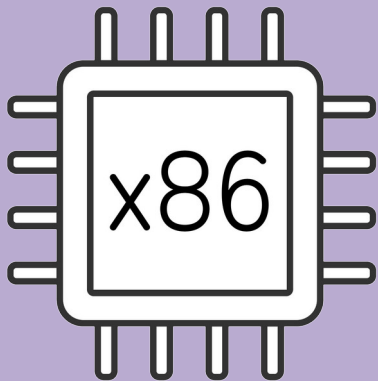
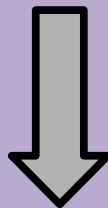


x86-64  
ARM64  
SPARC  
Cell BE  
PowerPC  
Apple M1





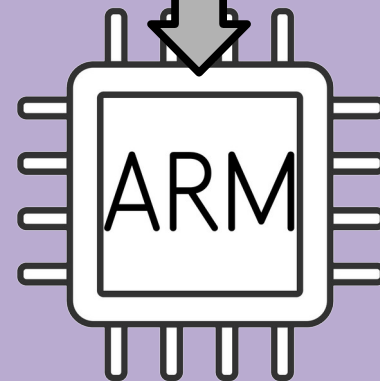
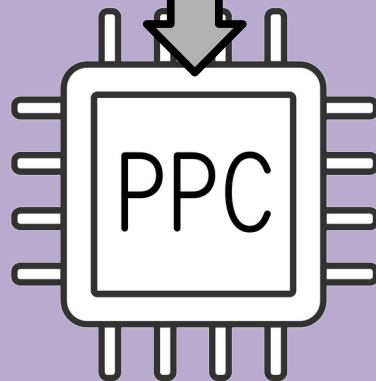
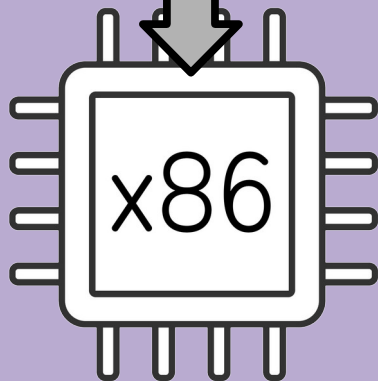
FNORDSOFT

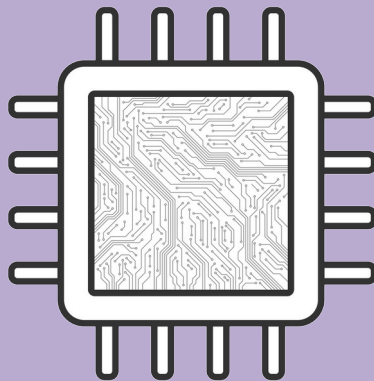
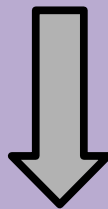
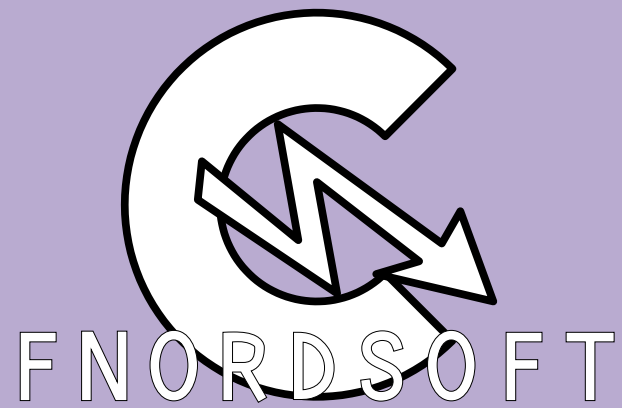


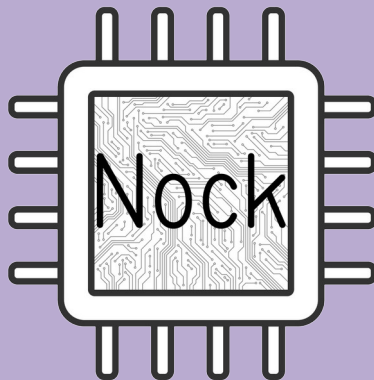
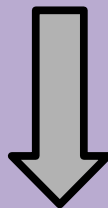
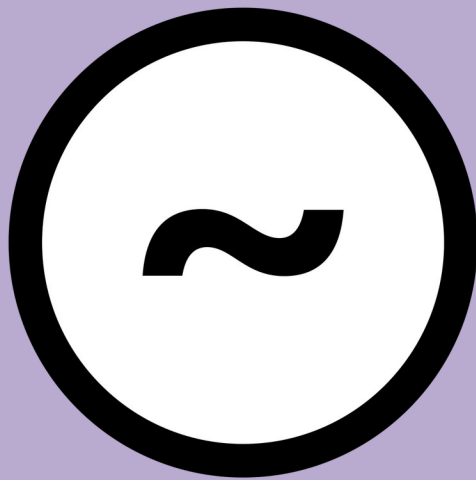


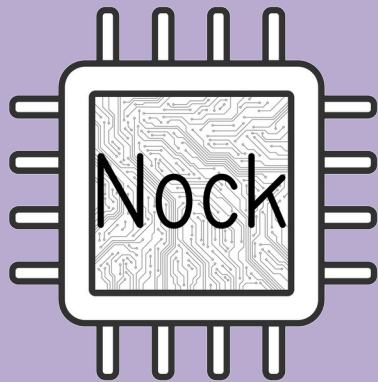
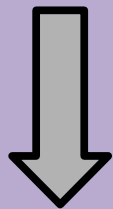
FNORDSOFT

Virtual Machine Interpreter









\*[a [b c] d]

\*[a 0 b]

\*[a 1 b]

\*[a 2 b c]

\*[a 3 b]

\*[a 4 b]

\*[a 5 b c]

\*[a 6 b c d]

\*[a 7 b c]

\*[a 8 b c]

\*[a 9 b c]

\*[a 10 [b c] d]

\*[a 11 [b c] d]

\*[a 11 b c]

\*a

[\*[a b c] \*[a d]]

/[b a]

b

\*[\*[a b] \*[a c]]

?[\*[a b]

+[\*[a b]

=[\*[a b] \*[a c]]

\*[a \*[[c d] 0 \*[2 3] 0 \*[a 4 4 b]]]]

\*[\*[a b] c]

\*[[\*[a b] a] c]

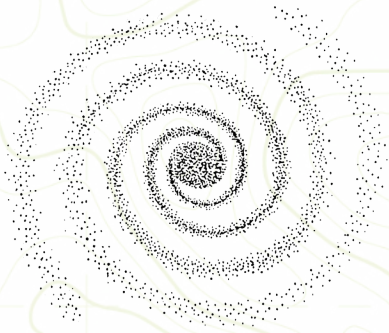
\*[\*[a c] 2 [0 1] 0 b]

#[b \*[a c] \*[a d]]

\*[[\*[a c] \*[a d]] 0 3]

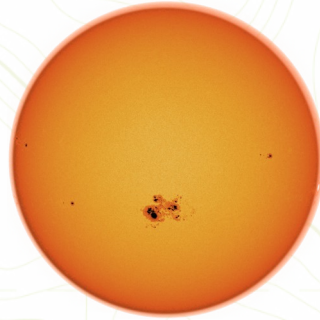
\*[a c]

\*a



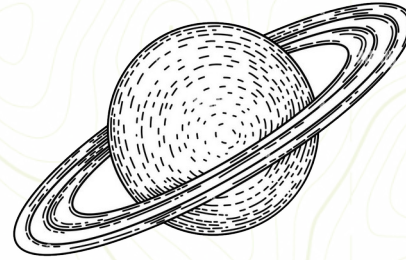
## Galaxy

- \* Network governance
- \* Software updates
- \* First-time routing



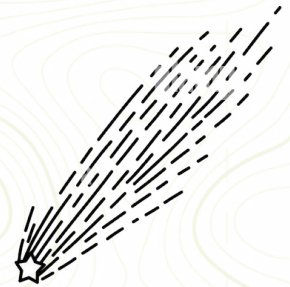
## Star

- \* Network routing (someday)
- \* Infra-structure



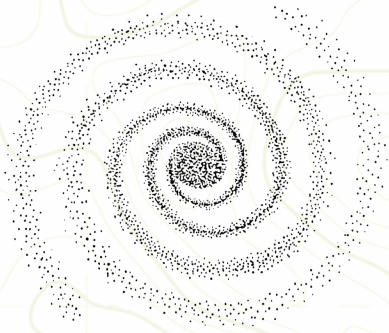
## Planet

- \* Individual identity



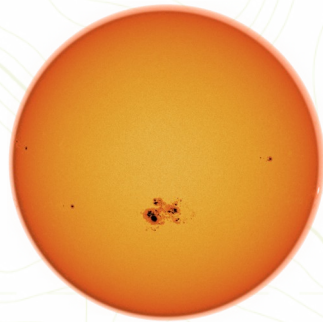
## Comet

- \* Transient ID



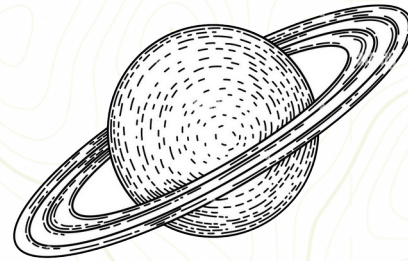
Galaxy

\* ~zod



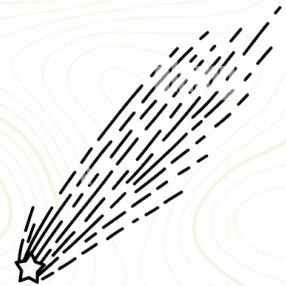
Star

\* ~marbud



Planet

\* ~sampil-palnet



Comet

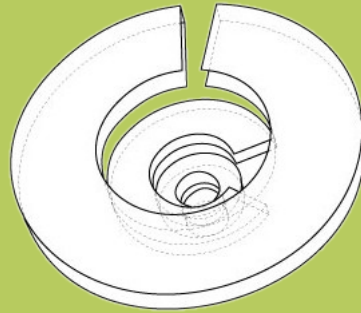
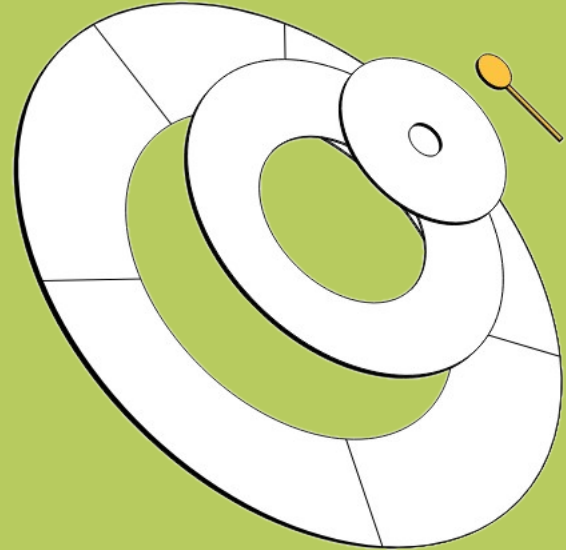
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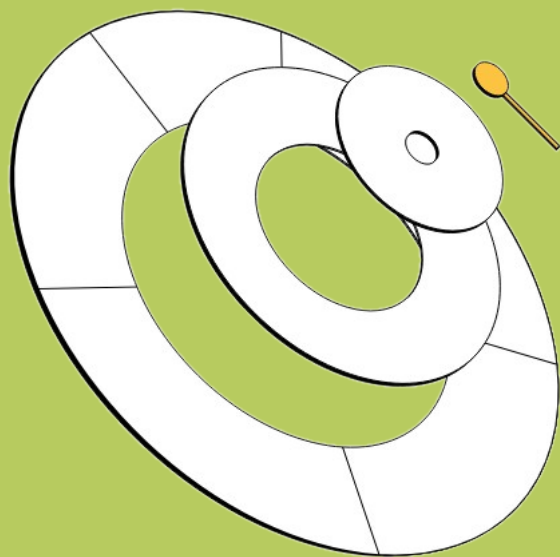
@p "patp"



# OS Structure

- \* Nock VM engine
- \* Hoon language
- \* Arvo event processor+  
state machine
- \* System services  
("vanes")
- \* Userspace apps





# Modalities for App Development

- \* On-Urbit app development
- \* Urbit-adjacent app development
- \* Urbit ID-based project
- \* Bridge app to Web3 chains etc.

# Modalities for App Development

- \* On-Urbit app development
  - \* Hoon School, App School
- \* Urbit-adjacent app development
  - \* App Workbook, %flap; Urbit Visor
- \* Urbit ID-based project
  - \* Azimuth docs, Ecliptic smart contracts
- \* Bridge app to Web3 chains etc.