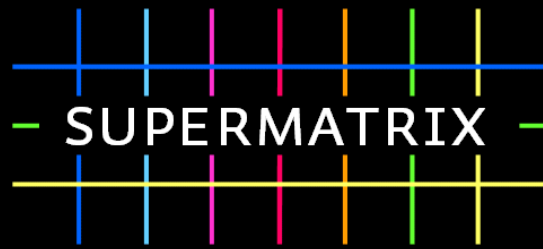


Jarmo Harju

Supermatrix Virtualizes Your Desktop Computer



Presentation Contents

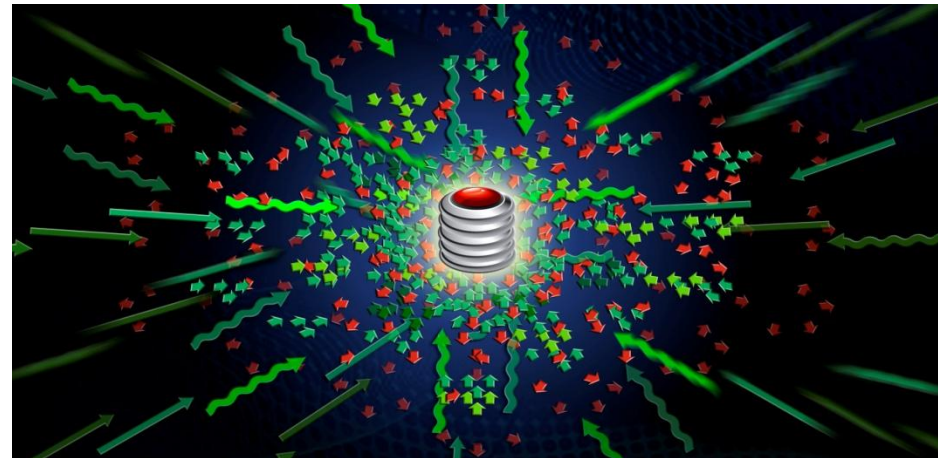
1. Today's Internet and home desktop computer are not up to the challenges of tomorrow.
2. Supermatrix: The next generation Internet platform.
3. Supermatrix virtual computer makes the home desktop computer obsolete.

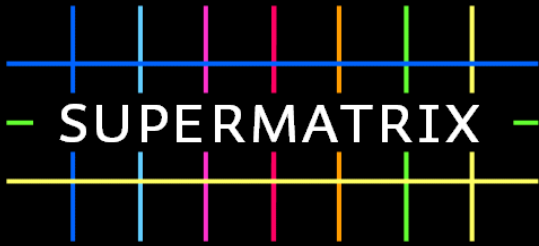


Hierarchical Internet reaching it's limits

- Internet's current hierarchical structure creates serious bottlenecks. *)
- The advertised bandwidths are not guaranteed between the end-user and service provider.
- The advertised connection speeds often only hype.

*) State Research Center VTT 2009: "In Finland, less than one thousand simultaneous HDTV Video on Demand –viewers can be enough to jam the national-level network nodes"

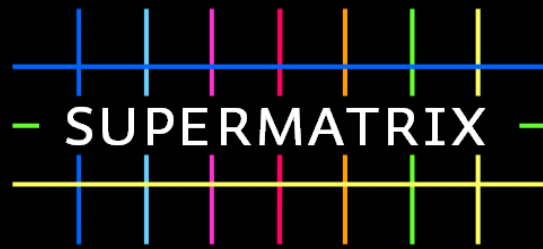




What's Wrong with Desktop Computer?

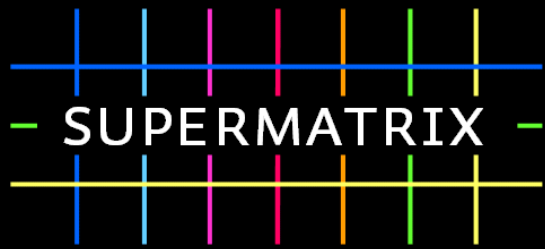
- Complexity
- Availability
- Security
- Noise
- Power consumption
- Idle time
- Cost





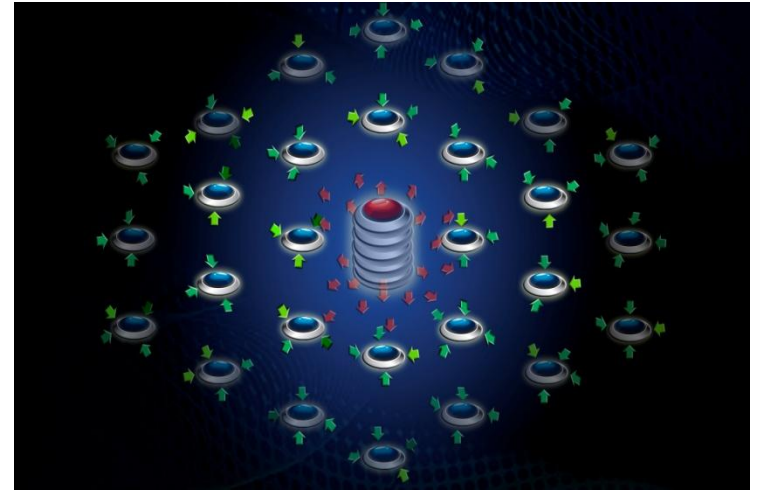
2. Supermatrix

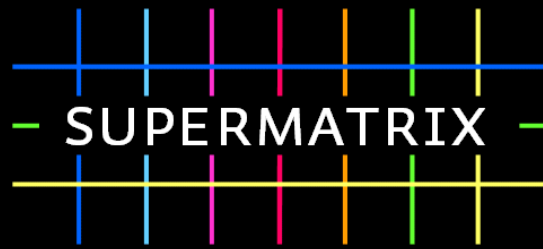
- Supermatrix: The next generation Internet platform.
 - New matrix-structured network architecture.
 - 100+ Mbit/s fiber optic connection.
 - Virtualized computer as service.



Matrix-structured Networks

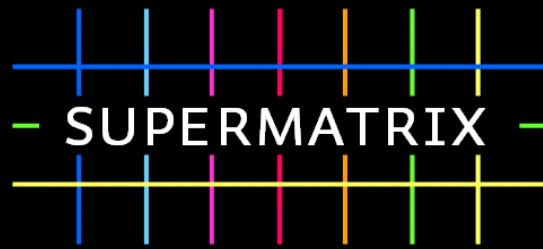
- New high-bandwidth applications require a new architecture of distributed services and matrix-structured networks:
 - Local services
 - No network bottlenecks



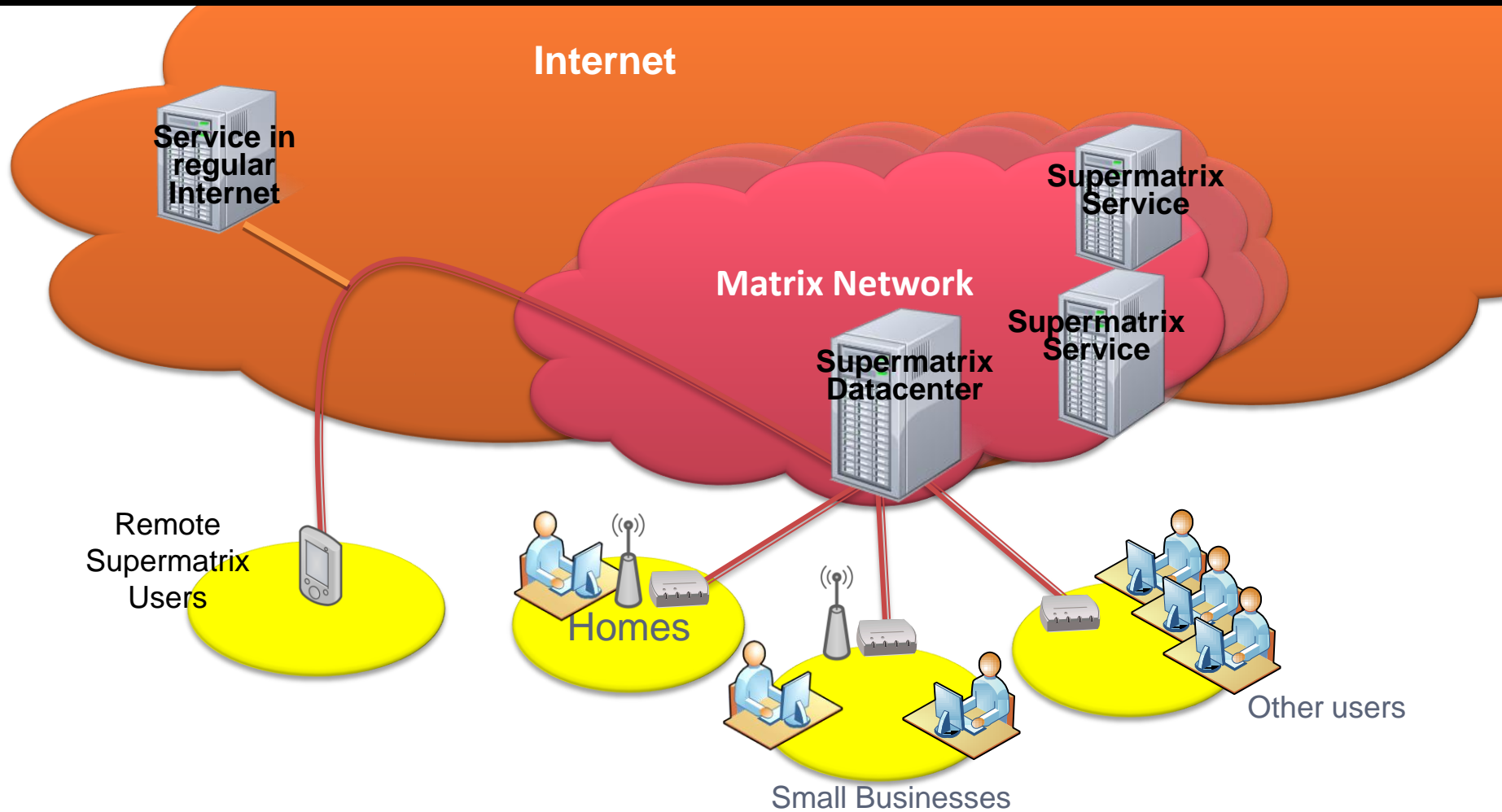


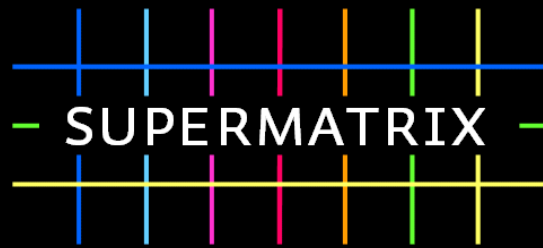
100+ Mbit/s for Home Users

- Supermatrix provides fiber optic connections for every house
 - Every household can have multiple 100+ Mbit/s connections.
 - The connection speed is guaranteed from your home to the nearest Supermatrix datacenter.
 - The network latency is minimal to guarantee best service level.



Matrix network: an island of superfast Internet connections





A project by a consortium led by Finnet Association

Finland-based multinational companies

Nokia Siemens Networks
Tieto Finland Oy

Finnish subsidiaries of multinational companies

Alcatel-Lucent
Cisco
Ericsson
Fujitsu
Hewlett-Packard
IBM
SUN Microsystems
VMware

Finnish IT-companies

AinaCom Oy
BCC Finland Oy
BaseN Oy
FC Sovelto Oyj
Futurice Oy
Innofactor Oy
Otavan Opisto
Softera Oy

Finnish telecom operators

Alajärven Puhelinosuuskunta
Etelä-Satakunnan Puhelin Oy
Eurajoen Puhelin Osk
FNE-Finland Oy
Forssan Seudun Puhelin Oy
Härkätien Puhelin Oy
Iisalmen Puhelin Oy
Ikaalisten-Parkanon Puhelin Osakeyhtiö
Kainuun Puhelinosuuskunta
Karjaan Puhelin Oy
Keikyän Puhelin Osk
Kemiön Puhelinosaakeyhtiö
Kymen Puhelin Oy
Laitilan Puhelin Osk
Loviisan Puhelin Oy
Länsilinkki Oy
Mariehamns Telefon Ab
Mikkelin Puhelin Oyj
Paraisten Puhelin Oy
Pietarsaaren Seudun Puhelin Oy
Pohjanmaan Puhelin Oy

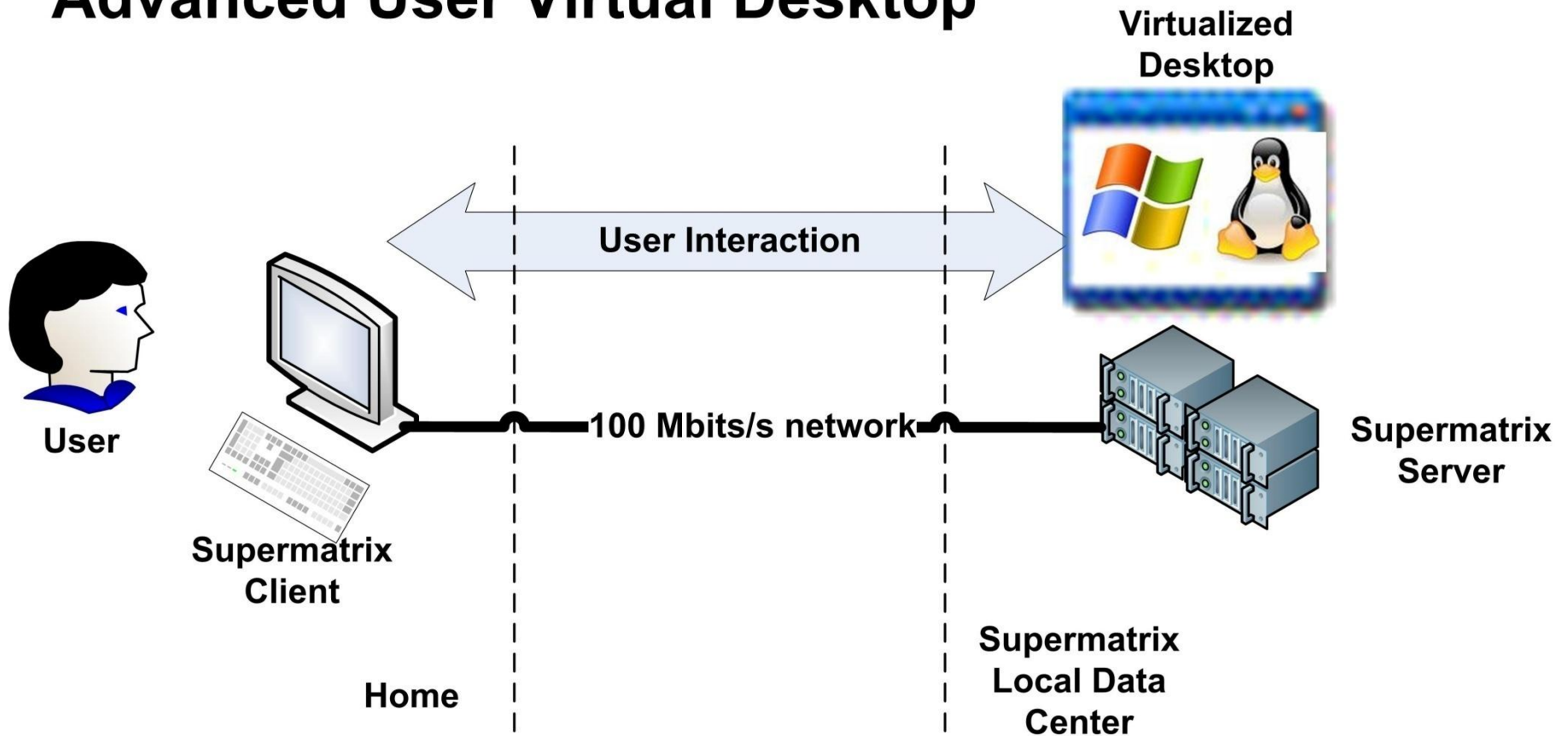
Pohjois-Hämeen Puhelin Oy
Salon Seudun Puhelin Oy
Savonlinnan Puhelin Oy
Tampereen Puhelin Oy
Telekarelia Oy
Innotele Oy/Vakka-Suomen Puhelin
Ålands Telefonandelslag

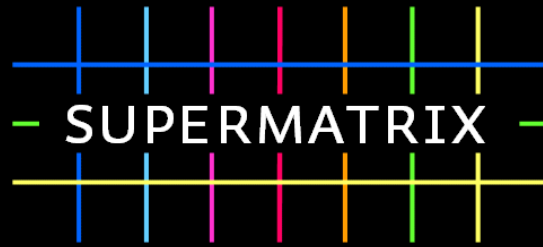


3. Supermatrix virtualized computer

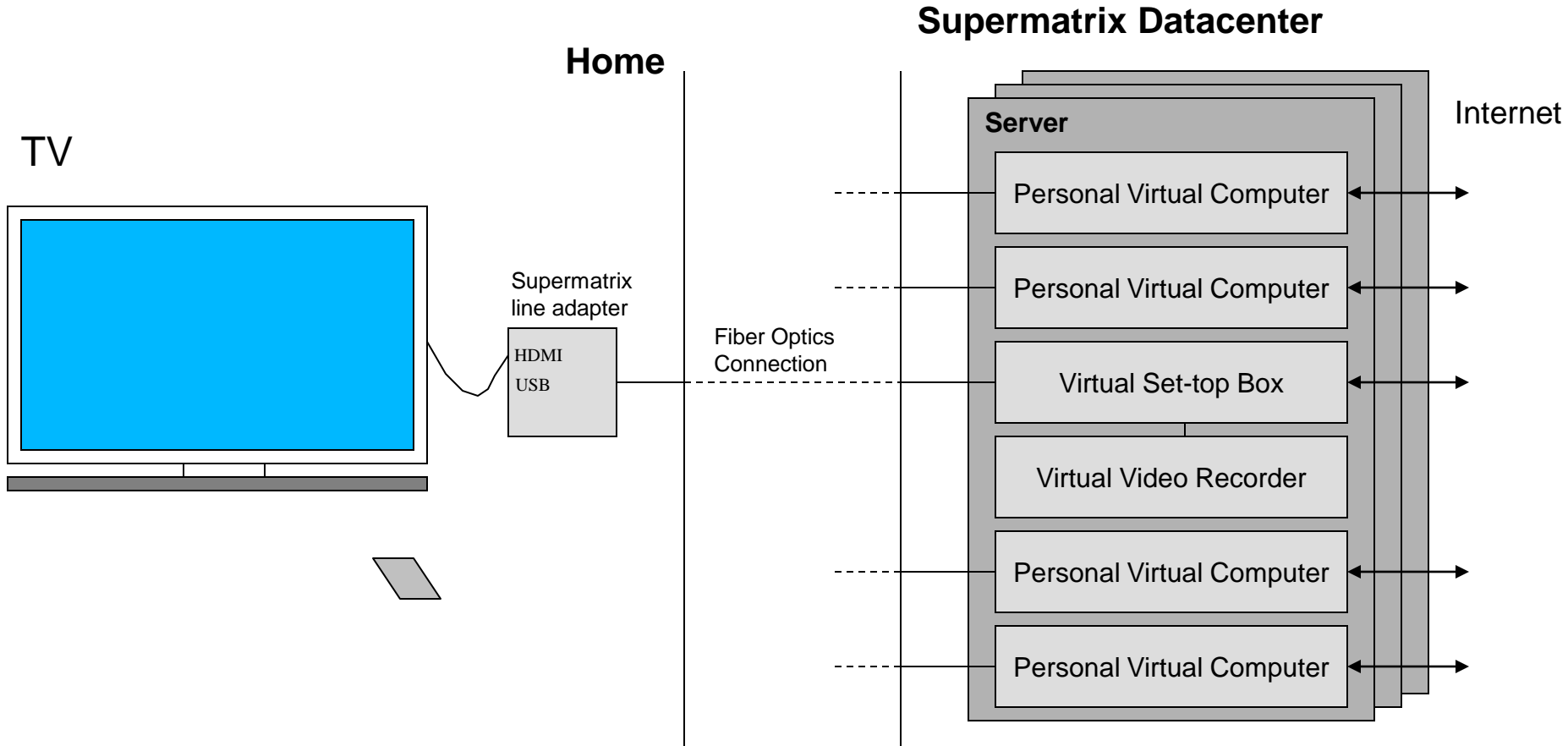
DRAFT

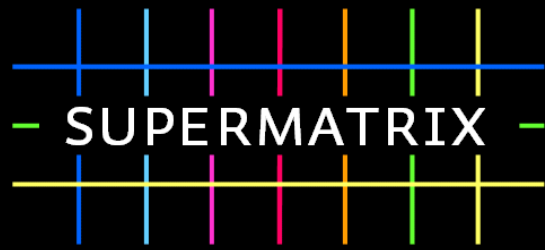
Advanced User Virtual Desktop





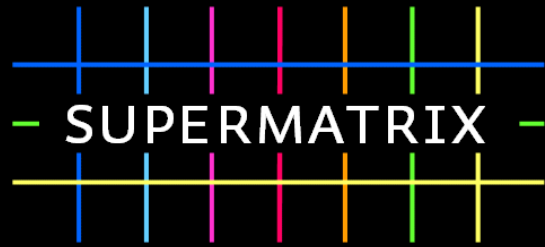
TV Set-top box in a cloud





Why this is better than your desktop computer?

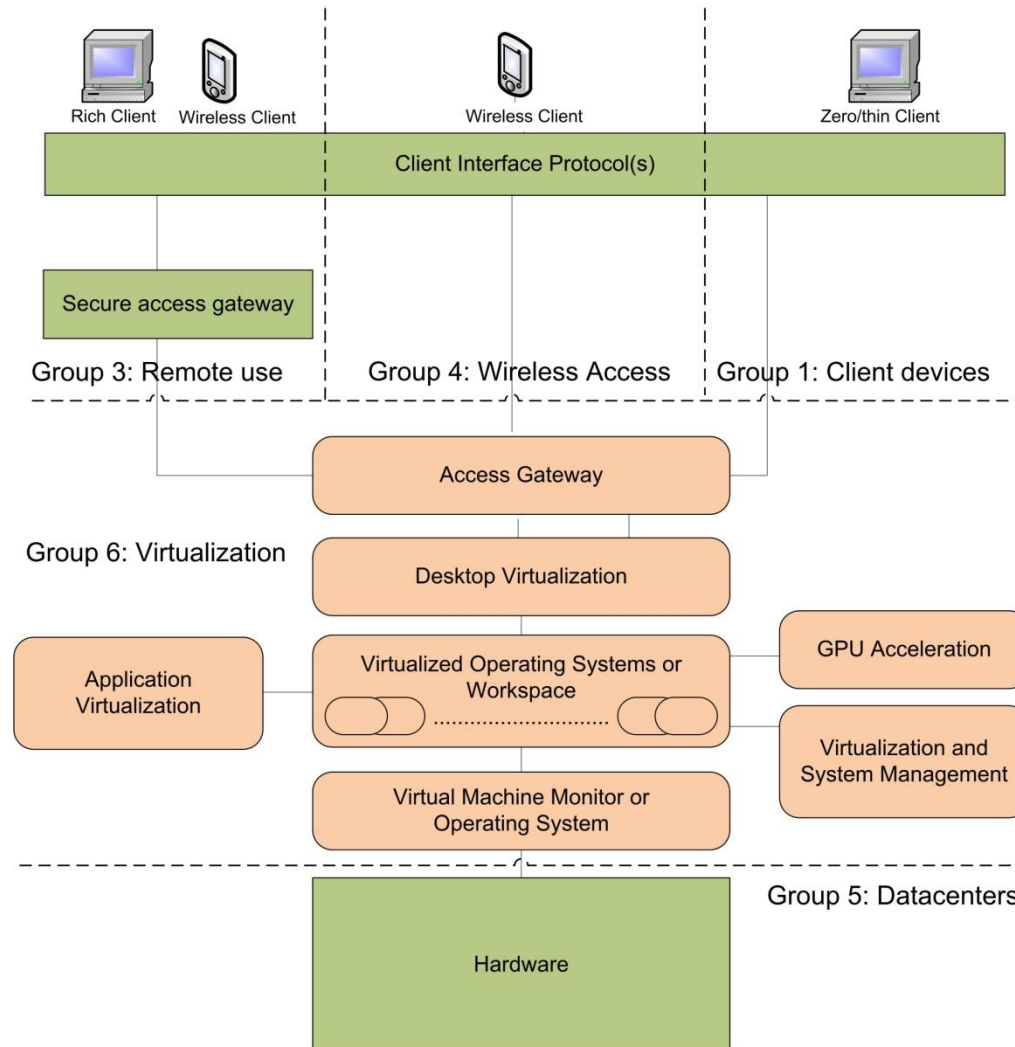
- **Complexity:** Managed by professionals
- **Availability:** Very high, due to fault tolerant architecture.
- **Security:** Like storing your data in a bank
- **Noise:** No mechanical moving parts => no noise
- **Power consumption:** A Supermatrix client device consumes only a fraction of energy consumed by a PC.
- **Idle time:** Hardware utilization level significantly better with shared resources.
- **Cost:** Lower than buying your own PC.



Typical virtualization architecture

TSG6: Virtualization architecture

DRAFT





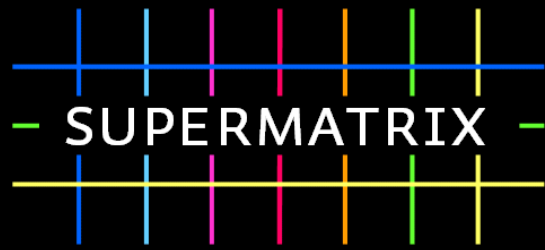
Location of the Supermatrix datacenter?



User

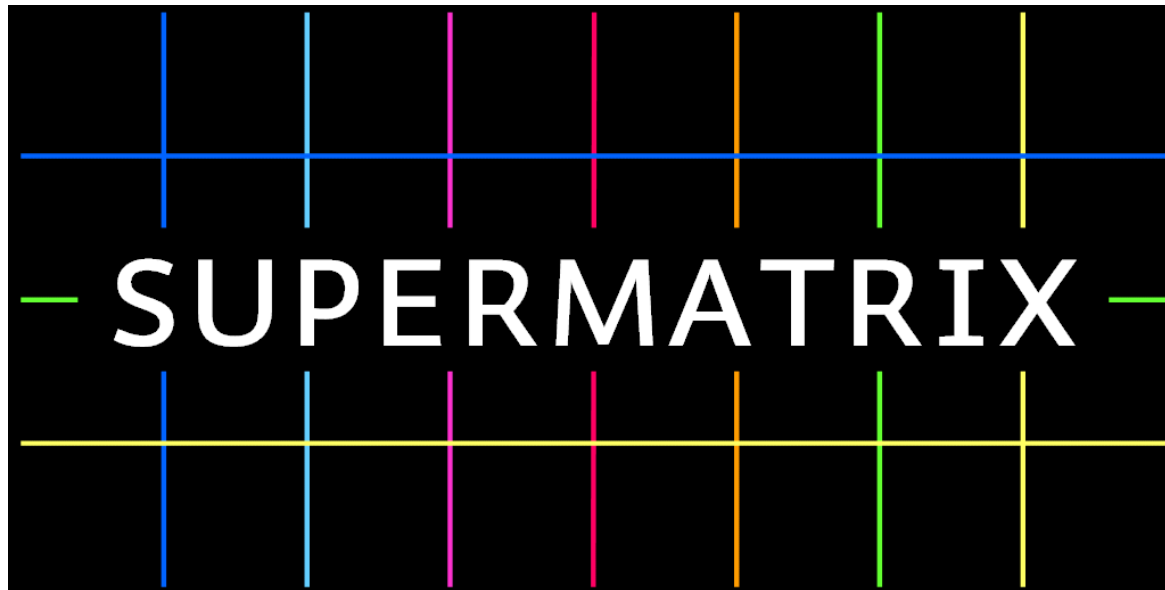
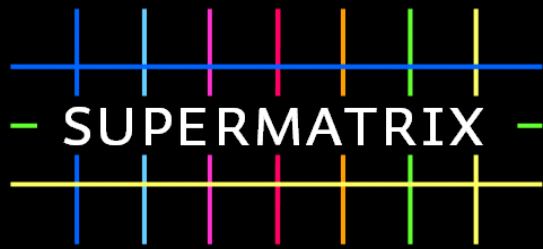


Datacenter

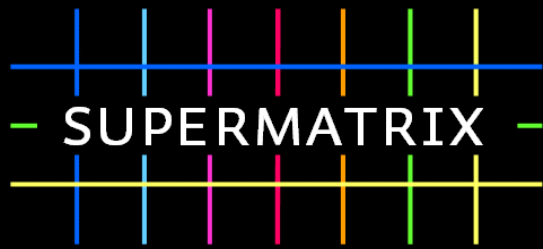


Other virtualization challenges

- "Big brother watching" fears
- User experience expectations
- Software licensing
- Commercial software pricing
- Open source software integration



- A platform for archiving and managing your lifetime's information.
- An ecosystem for growing future businesses.



Thank You !

Any Questions or Comments ?

www.supermatrix.fi

See also linkedin-group Supermatrix

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