Ubiquitous Network Browser (UNB)

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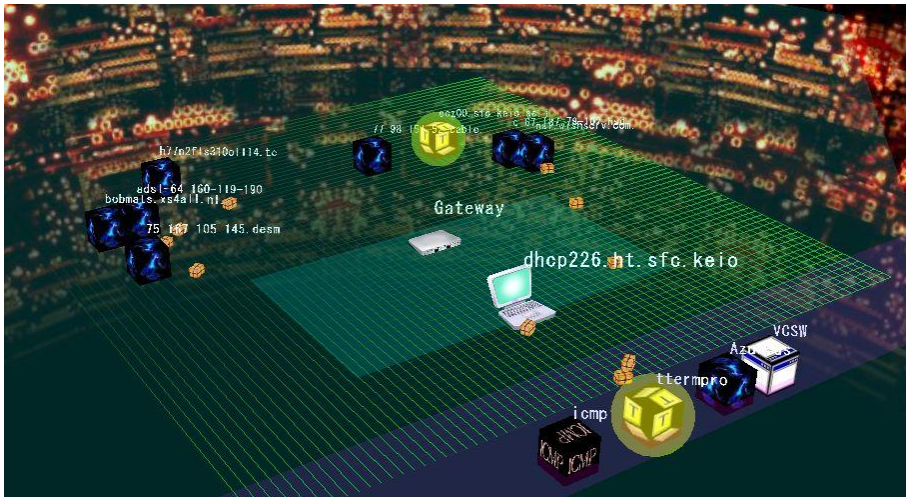
Ubiquitous Network Browser (UNB)

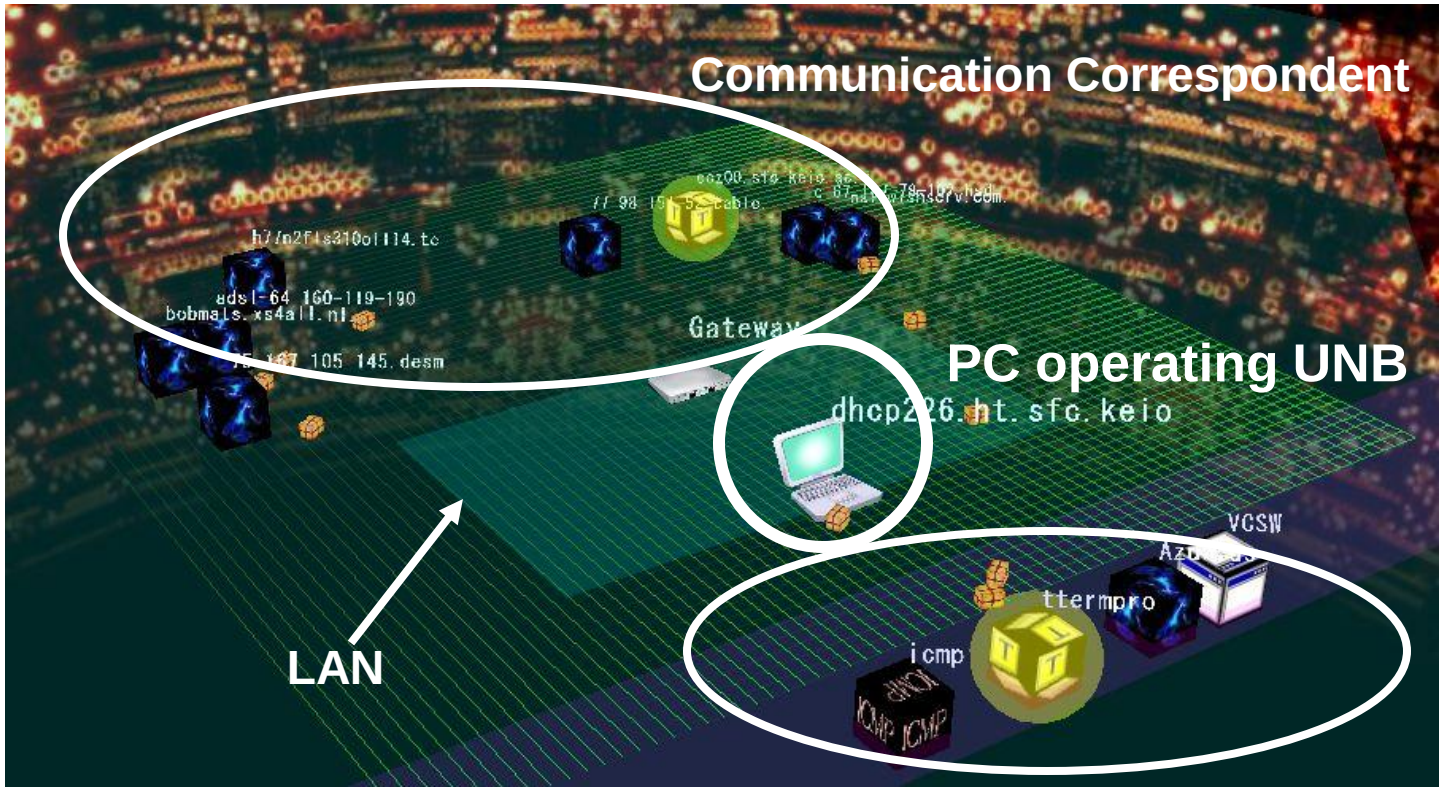
- The internet communication visualizer
  - **network browser**
- Novel real-time traffic visualization
- For general computer users and daily-use **ubiquitous** PCs.
- Simple, easy-to-understand, entertainment-oriented
- An endhost-centric stand-alone software



What can UNB realize?

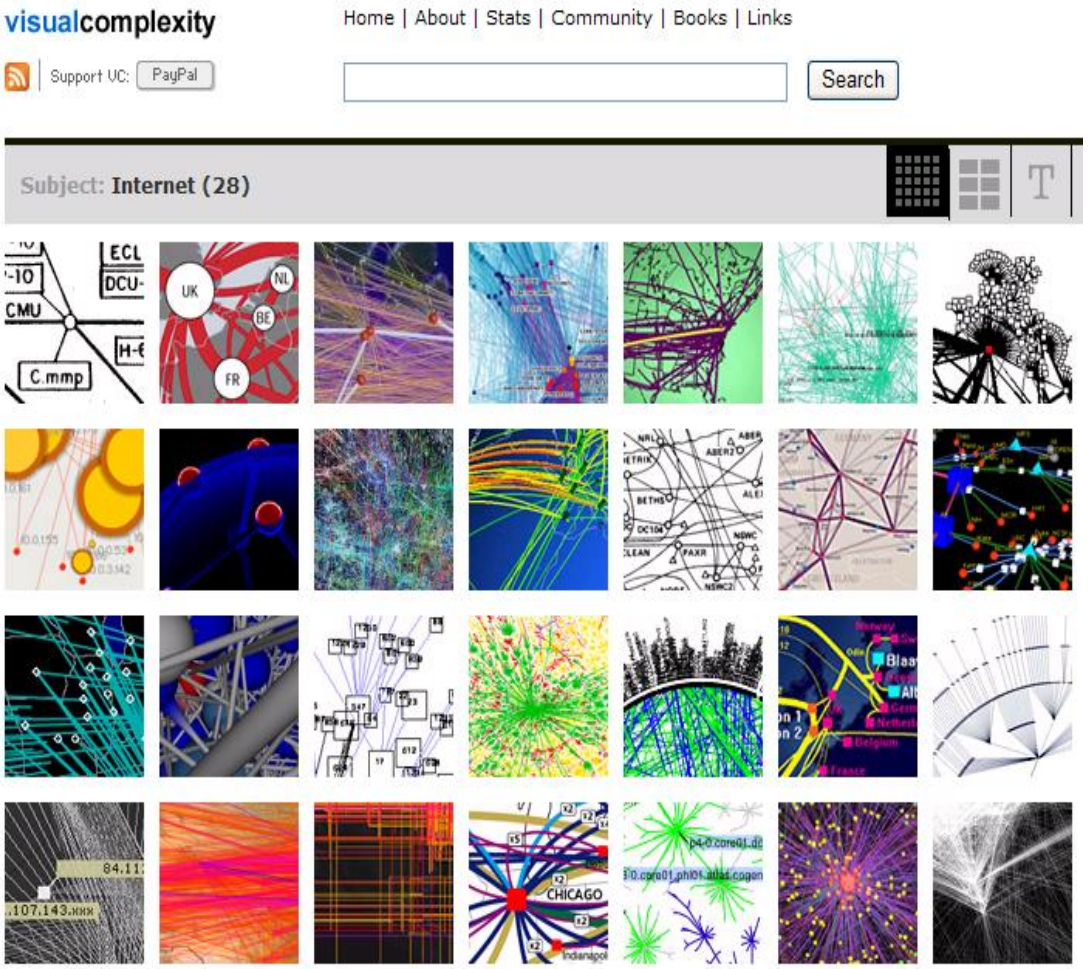
1. Users (including Administrators) can
   - See and learn the Internet activities of various applications when they want.
     - E.g. when connecting wireless APs of neighbors.
   - See and track the illegal network access or invisible information leakages from applications.
2. The ICT literacy of PC users can be advanced.
3. The network activities of applications (including Personal F/Ws, anti-virus software) can be visually checked.
   - As a comm. validation or compliance check tool.

Demonstration of UNB



Application Icons of the PC

Previous visualization of Internet



- Professional use
- Relatively Static
- Large-scale
- Router level
- Topology based
- Complex

http://www.visualcomplexity.com/vc/index.cfm?domain=Internet

UNB position & related solutions

Previous Business Area

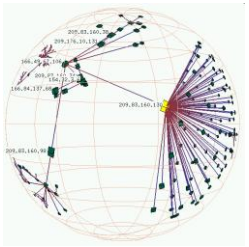
Iministrators

TTT

onitor plus
Wireshark

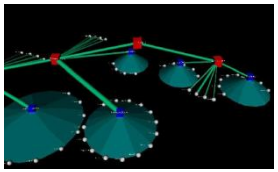
Traffic Visualization

skitter

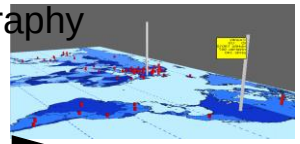


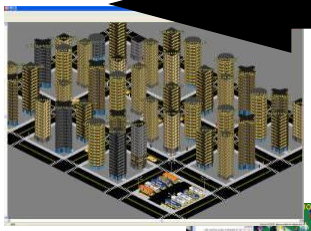
Snmp based Tools
BGP Tools

3D-Visualization Research



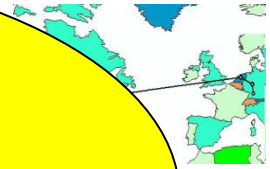
Cyber-Geography





visitorville

UNB



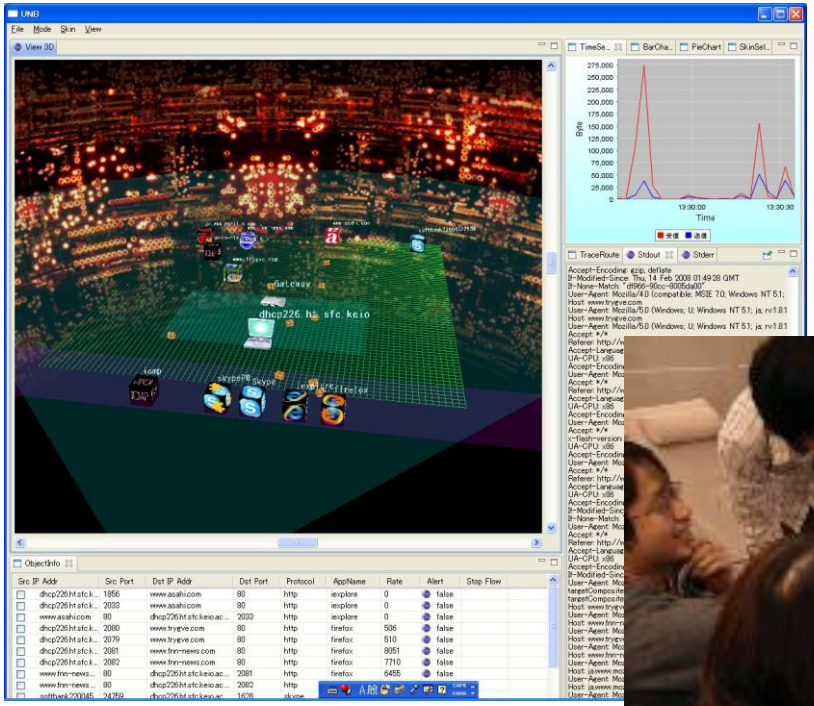
3D-traceroute

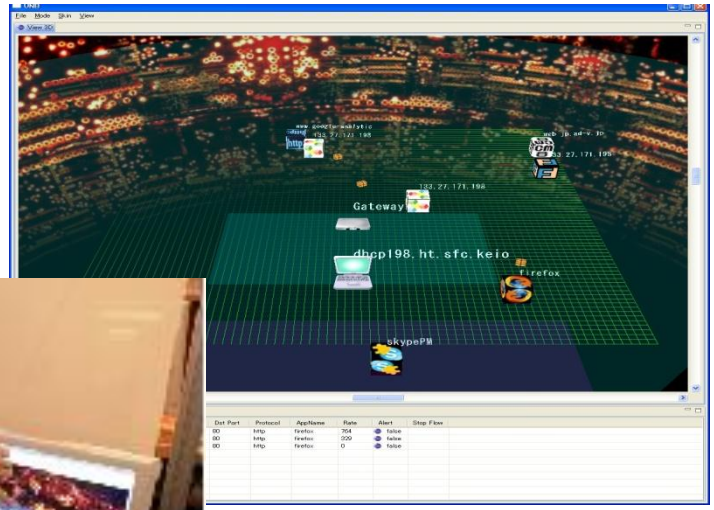
Topology Visualization

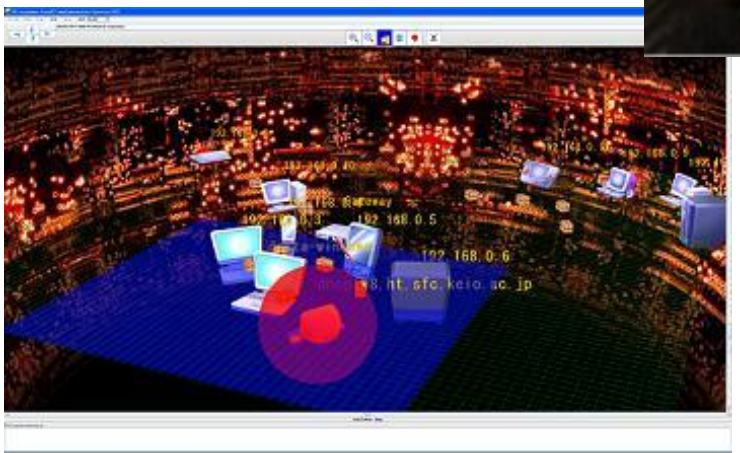
For General User

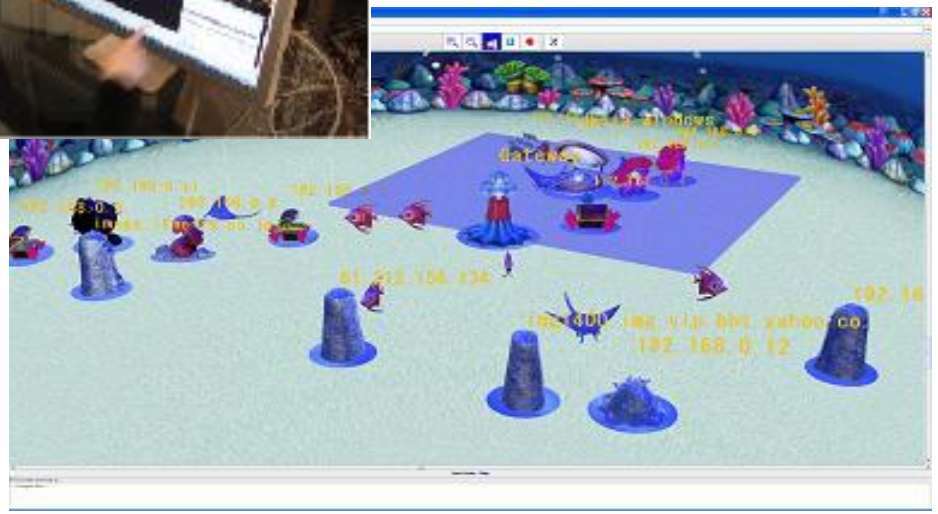
http://www.3d-tcpdump.org/

Other screenshots of UNB

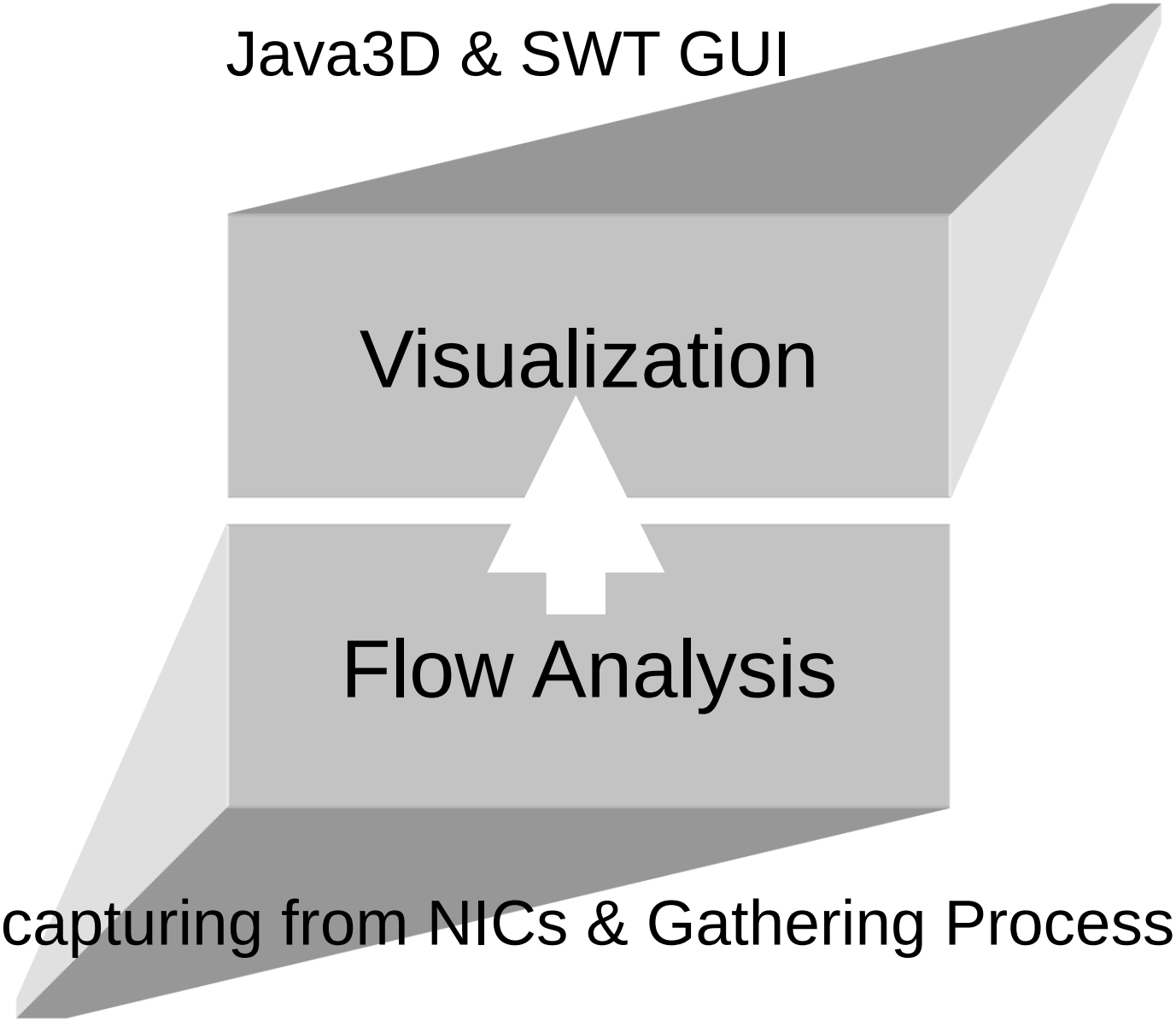




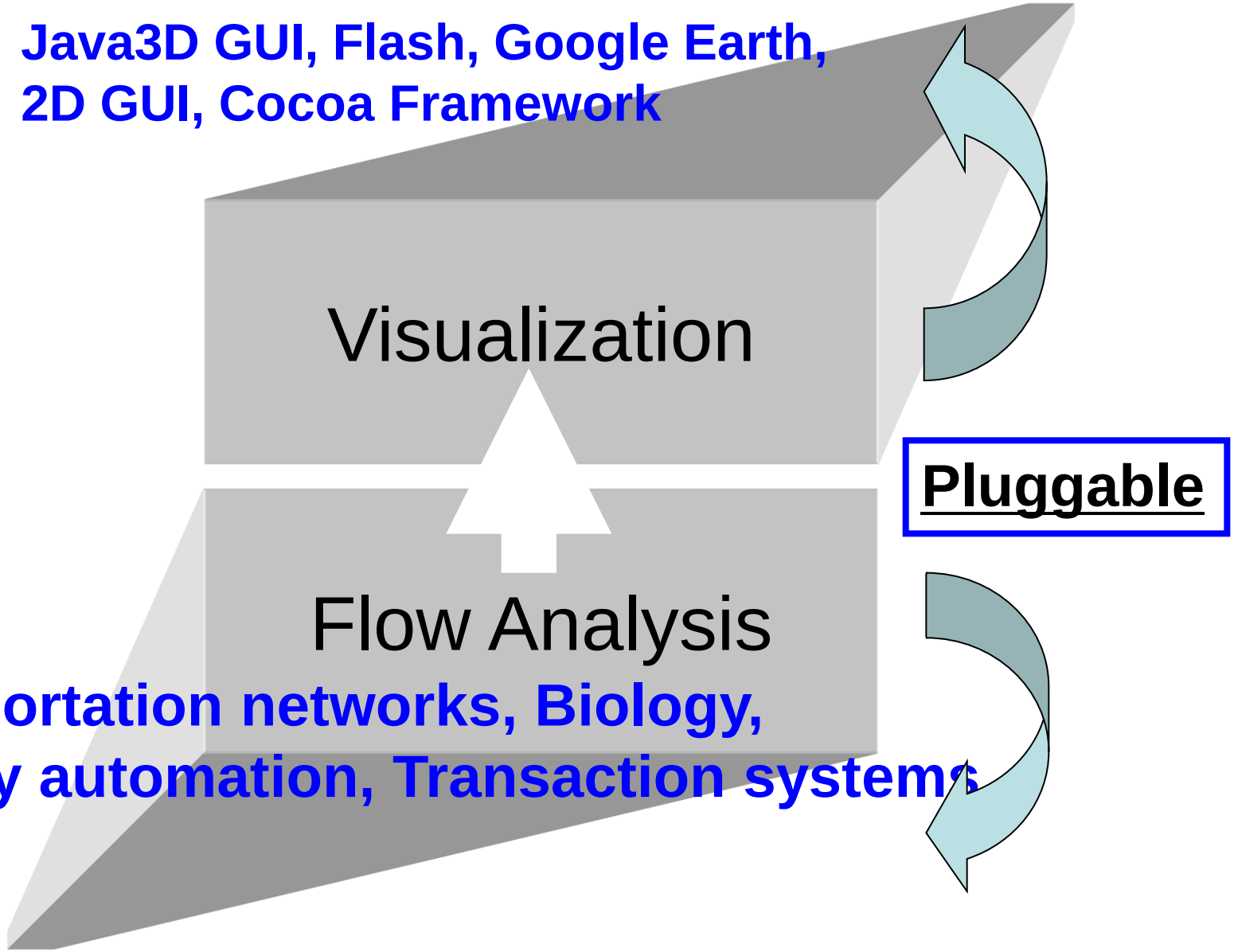




Two components of UNB architecture



Non-IT applications of UNB



IT applications of UNB

1. **A front-end visualization software for various antivirus software or Personal F/Ws**.
   - Coordinated with Internet security companies
2. **A reporting and info. gathering client software** installed on enterprise or home PCs
   - Towards IT management department of middle & large companies or ISP providing software
3. **A graphical LOG analysis software** of the network dump (character) info.
   - For specific ICT companies

Future plans of UNB

- As a “serious game”
  - for learning the Internet or ICT literacy
  - A novel area converging the game contents technology and the Internet applications.
- Towards ICT (networking) education
  - for children or teenager to learn the Internet
  - The Internet security or network simulator

Thank you for listening.

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The e2e + n visualization model

1. **Default View**
   - **E2E + 1 ＝ end-to-end + a default router**
   - **IP Subnet Model（Catenet Model）**
     - **SALTZER, J. H., et. al. 1984. “End-To-End Arguments In System Design.” *ACM Trans. on Computer Systems***
   - **Like the connection model of Home Networks**
2. **Advanced Views**
   - **E2E + N = end-to-end + Multiple Routers**