

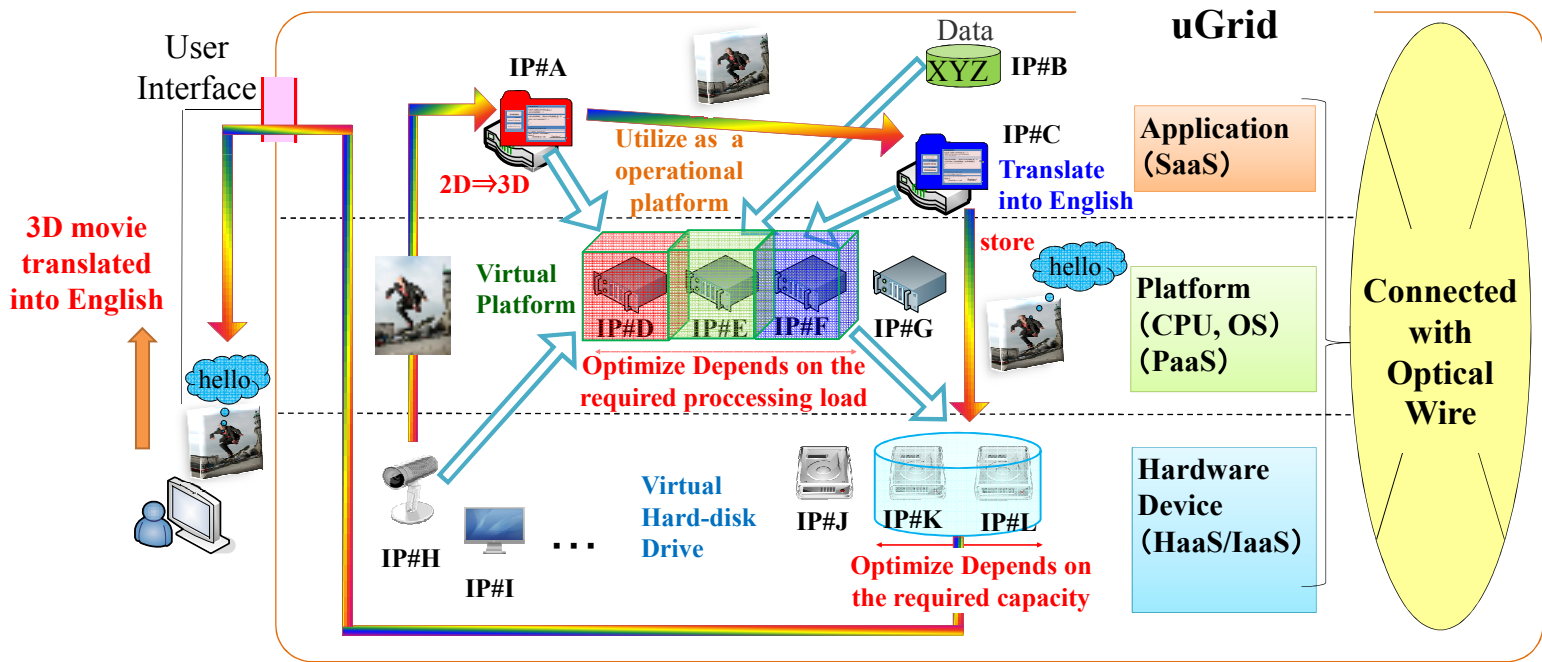
Ubiquitous Grid Networking Environment ~uGrid~

What is uGrid?

- ◆ Increase in demand for rich contents and diversify demand for contents

uGrid

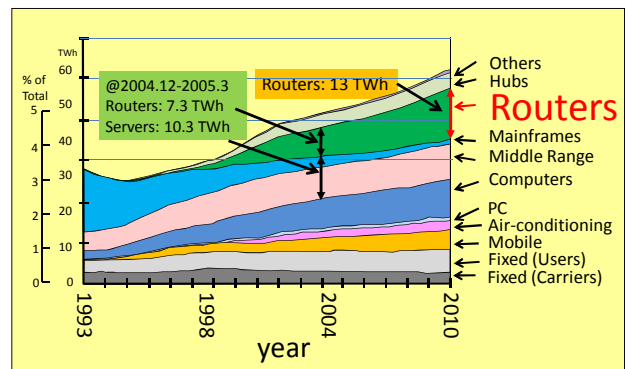
- ◆ Create required contents by combining application, platform, hardware (**service parts**)
- ◆ Every service parts have their unique IP address



Research Issues

- ◆ Calculation method go through required service parts
- ◆ Optimal Allocation of Service Parts
- ◆ Architecture and Control method

Forecast of the energy consumption for ICT equipment in Japan



Increase in energy consumption of network equipments

Set a goal to reduce energy consumption for this research

This work is supported by “R&D for Construction of Leading-edge Green Cloud Infrastructure (Environment-Related Network Signaling Technology)” project of Ministry of Internal Affairs and Communication (MIC) of Japan. .

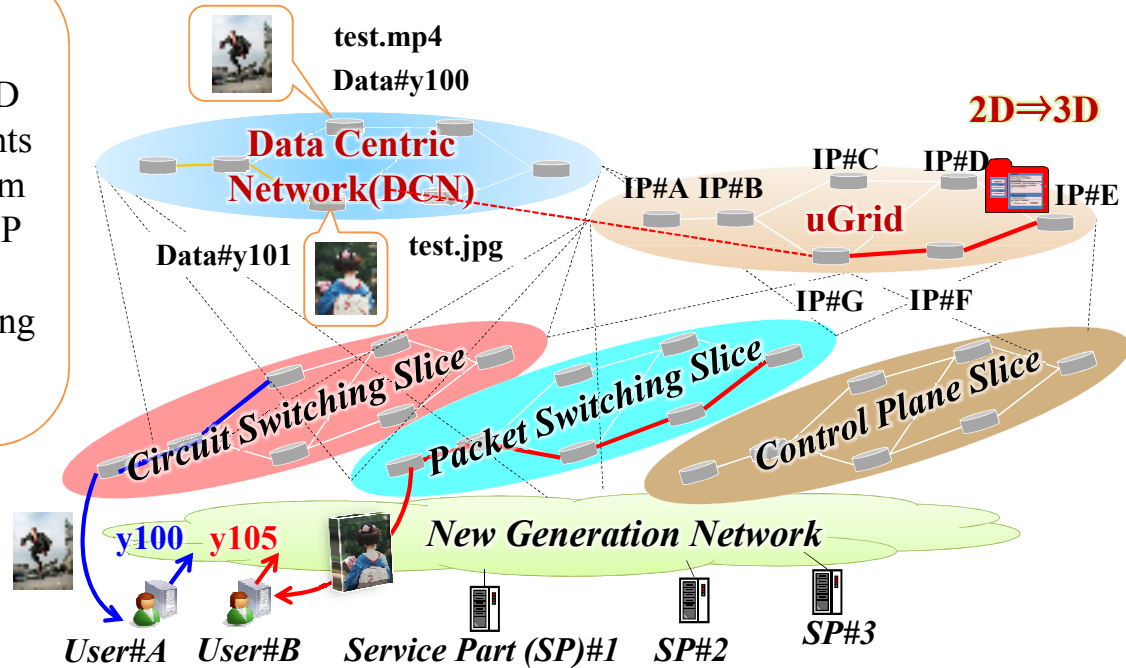
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Architecture

- ◆ Chose a route according to type of traffic and condition of network by using Slice
- ◆ Use Data ID based network(DCN) and IP based network(uGrid) concurrently

Performance

1. Request contents to DCN by using Data ID
2. When required contents don't exist, create them in uGrid network by IP based routing
3. Select a route according to type of traffic and network condition



Data ID	Contents
y100	test.mp4
y101	test.jpg
y105	test.jpg + 3D

How to Realize the Energy Saving Network?

Aggregate paths to minimize using service parts

Shorten the path by coping service parts to optimal place

