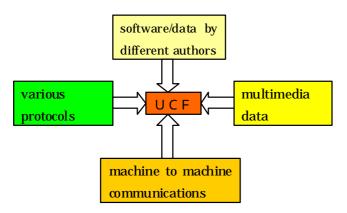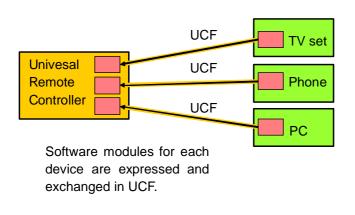# Universal Communication Format (UCF)

Professor Yukio Hiranaka

Unification of Data and Communication with UCF

software/data by different authors

various protocols

multimedia data

machine to machine communications

Universal Remote Controller (communicates devices with UCF, migrates programs expressed in UCF)

UCF — TV set

UCF — Phone

UCF — PC

Univesal Remote Controller

Software modules for each device are expressed and exchanged in UCF.

Content

Various objects can communicate each other through network. Already, we have hardware and software for enabling communication between human-to-human, human-to-machine and machine-to-machine. However, there is no unified rule or fixed universal standard about subjects to be exchanged, format and protocol to be used. Current technology developments are still driving force for evolving chaos.

We are proposing UCF as the minimum rule assuring the capability of mutual communication. It is an XML style abstract format which represents any communication with two components of its target name and its message content expressed in characters. Those are essentials to communication, and they do not obstruct evolution of communication mechanism, software and applications.

As practical applications of UCF, we are developing a universal UCF simulator which enables to implement and test real software, UCF cross-layer mechanism for optimizing band width usage with communicating between network units and traffic sources, UCF universal remote controller, and UCF capable appliances for regulating total electric power consumption by mutual communications.

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