abstract

In recent years, IoT (Internet of Things) has attracted attention, and various devices and services are also mixed in the home network.
In the past, the home network was mostly implemented as one broadcast domain, but in recent years, it is necessary to divide it into a plurality of segments for the purpose of preventing unnecessary operation by the user or complementing the security strength of the equipment Has occurred. It is also expected that more efficient use of the network will be possible if configuration changes can be made more proactively that can only communicate with specific devices triggered by services and device information as a trigger.
Dynamic configuration change is defined in this research as dynamically performing such segment division. In addition, dynamic configuration change which can only communicate with specific equipment triggered more actively by service or equipment information It is expected that it will be possible to use a more efficient network if it can do.
However, in the home network, there is a gap between the purpose of dynamic configuration change and the actual network configuration, it is difficult to dynamically change all things mechanically, so the knowledgeable end user In this research, we develop a system that assists dynamic configuration change on the assumption that the end user is responsible for dynamically changing the dynamic configuration of the network Aim to be
As a result, users are actively making dynamic configuration changes, greatly changing the way home networks were fixed in the past, and in terms of reliability, convenience, safety, etc. , superior to conventional It is possible to realize a home network.
In this research, we will visualize the device information, service information, topology information of the home network to assist users in dynamically changing the configuration, without having to directly configure the NW device by the user, We proposed an architecture that can dynamically change the configuration by performing various operations.
Sequentially showed that multiple primitives can be performed by this proposed architecture Finally, we verified the primitives against the customer support use case in the TR − 1062 home network service and showed the validity of the primitives.