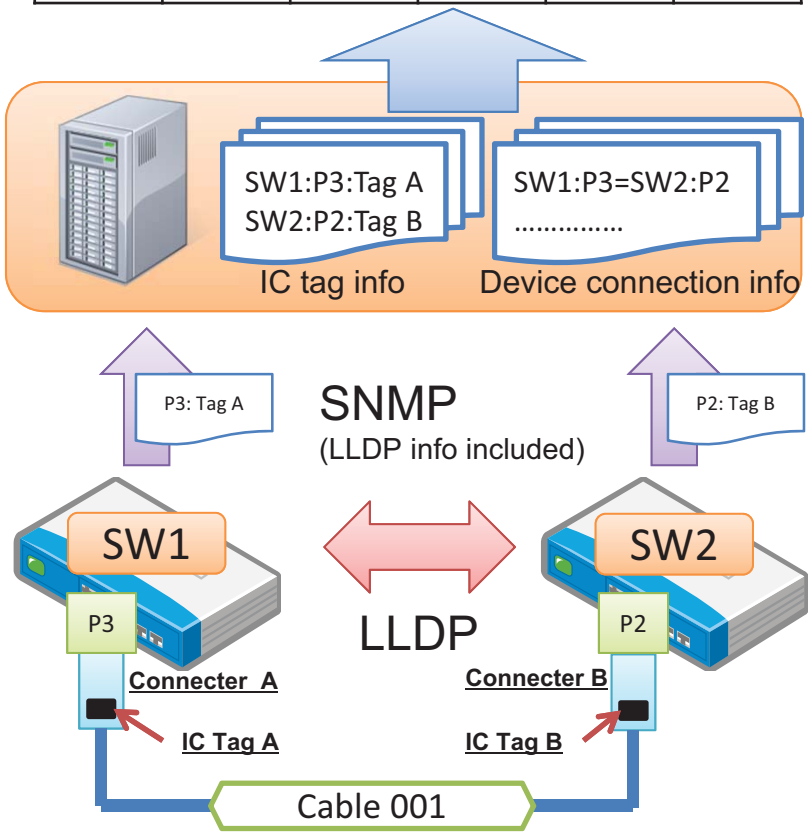
Faculty of Engineering
Tokushima University

Automation of network cabling management with high security

Associate Professor Masahiko Sano

<Cables information table>

CABLE NO.	TAG PAIR FROM	TAG PAIR TO	DEVICE PORT FROM	DEVICE PORT TO	STATUS
001 002	TAG A TAG ...	TAG B ...	SW1:P3	SW2:P2	ACTIVE NA



Content:

In general, the physical cabling information of LAN in a building is managed by the databases or documents described their interconnection information. However, the management cost, for example updating their data, increases in the large network configurations. In addition, the safety of the information system is essential for the information society of today.

The purposes of this research are to allow the automatic construction of physical wiring database described above, to detect (malicious material or due to work) replacement of physical wiring. The former reduces the manpower of administrative tasks, the latter to improve the information security by the detection of malicious attacks and the mistake of wiring on the maintenance.

In this research, we are trying to embed a low cost IC tag in each cable connector. The physical port connection relations collected with LLDP and the IC tag information collected with SNMP are able to pair both ends of the cable automatically.

Keywords: lan cable management, security

E-mail: sano@ipc2.tokushima-u.ac.jp
Tel. +81-88-656-7557
Fax: +81-88-656-9122