

# Network and application of ICT technology



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<b>Keywords</b>	Network, IoT, e-health, ICT for the seniors, smart agriculture, security		
<b>Technical Support Skills</b>	<ul style="list-style-type: none"> <li>Information network, network protocol, disaster resilient network</li> <li>IoT (Internet of Things), deployment of IoT technology for improving efficiency</li> <li>E-health, ICT technology for seniors, smart agriculture, technology for emerging countries</li> </ul>		

## Research Contents

### (1) Research on high performance networking

In recent years, various devices have started connecting to the Internet through various medium. As such the challenges in the networking domain has increased multifold. For example, when various network devices load large volume of data on to the network, congestion is likely to occur. Again, when conventional network technologies are deployed over a new environment, the network performance may be severely affected due to the specific characteristics of the environment. We have been working on devising new technologies with a view to overcoming such problems. As an example, we have proposed TCP Cherry for use over satellite link to overcome the performance degradation due to link error and long propagation delay. In addition, with a view to developing a disaster resilient network infrastructure, we have been proposing Context Aware Network Protocol (CANP) and are currently implementing one layer of CANP, that we name as Context Aware Transport Protocol (CATP).

### (2) Research on application of ICT technology

In recent years, deployment of internet of things (IoT) has been expanding rapidly. The number of connected objects has been projected to reach 50 billion in 2020. There are various challenge toward reaching this high paced growth of the technology. In order to meet these challenges, we have been proposing a new generation IoT platform that we name as KIBAN. Also, we have been conducting research on application of IoT in daily life, for example, in empowerment of the seniors. In addition, we are conducting research on e-health, smart agriculture, smart city etc.

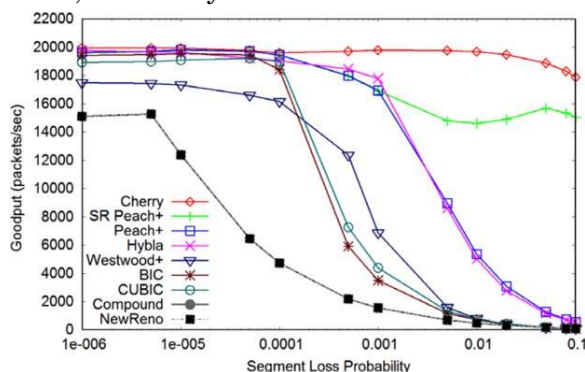


Fig.: TCP-Cherry yields up to 150% better performance

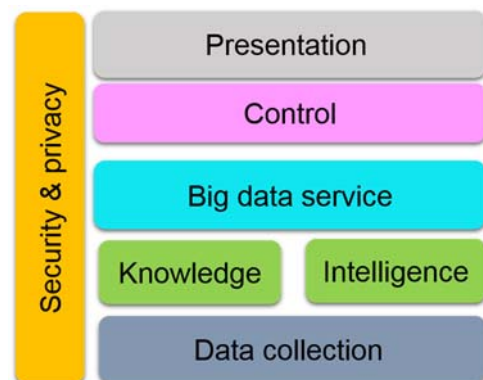


Fig: Multilayer architecture of the KIBAN platform

## Available Facilities and Equipment
