

# CLEAR SIGHT NETWORK TIME MACHINE Offers Powerful Support for Wireless Data Communication Service

"AIR-EDGE", introduced by the only communication provider of PHS in Japan, is a PHS-based wireless data communication service with fixed charges. The great attractiveness of this service is that, users can enjoy up to 800kbps stable data communication service with only a small fixed charge of JPY3, 880 per month.

In order to have users enjoy a safe and excellent service every time and everywhere, the company has introduced the Network Time Machine system from ClearSight, in order to get effective data verification and a smooth business expansion.



ClearSight Network Time Machine

## The Challenges for AIR-EDGE Service Development

The development of "AIR-EDGE" Internet gateway system is a main work of Node Development Department 2 in WILLCOM, where Yasuhiro Otsuka works. They have used the ClearSight Network Time Machine since 2006.

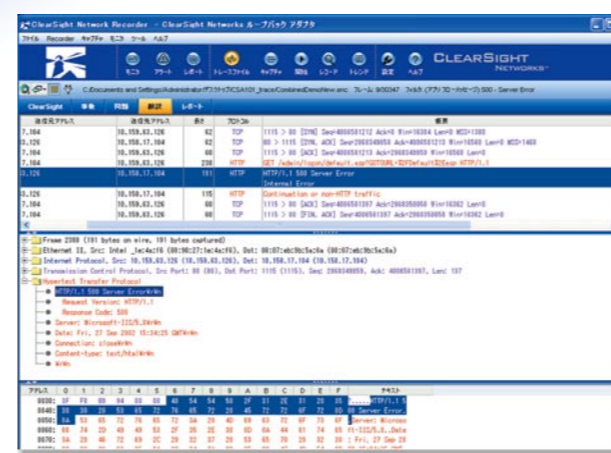
Before that, they used a kind of self-developed tool with other application software. It provided a degree of packet decoding capability at that time. However, since then the processing capacity of the central system has been increasing greatly year by year, and the ability to support gigabit rate is now urgent.

"We usually do extensive testing on

each service before releasing it into commercial use. However, with the various recent updates of our system environment, it is difficult to avoid packet loss using our own tools for data capturing and testing." Mr. Yasuhiro described the challenges they encounter in data testing at this time.

For example, a user wants to connect to a WILLCOM gateway from a PHS terminal through a WILLCOM network. In order to prevent the potential network environment problems on connecting, Yasuhiro's group set up a special experimental access point, (separated from the normal users' network environment) for data testing. However, the amount of captured data is still huge due to network traffic from the

emails, web browsing, and streaming media. To sample the required packets from such a huge amount of data, and to confirm whether the associated equipment is operating properly, the risk of losing useful packets must be eliminated.



Packet Decodes Picture

## Two Wonderful Features of the ClearSight Network Time Machine

When the corporation planned to change its equipment in 2006, Mr. Yasuhiro discussed his plans with the related department of Toyo Corporation he met when introducing the SmartBits system. And it was at that time that he saw the product materials about the ClearSight Network Time Machine (called ClearSight Network Recorder at that time). Mr. Yasuhiro described his first impression of this product by saying, "what attracts us most is that it can handle our current troublesome problem of packet loss in a gigabit rate environment."

However, Mr. Yasuhiro still wanted to see the Network Time Machine in operation on a real network. He came

to Toyo Corporation to see the product demonstration by himself, but was still not absolutely convinced. "So they showed me how they use the Network Time Machine combined with SmartBits to capture and process data on a nearly gigabit rate network, so as to redisplay a web page." Mr. Yasuhiro said afterwards.

We tested two characteristic features of this system at the same time. The first was its powerful data capture function -- capturing 100 percent of data on a full duplex gigabit rate network without any dropped packets; the second was its long-term data storage function with a large hard disk drive capacity. Together, these features enable continuous capturing and storage of network data.

After being assured that their urgent



WILLCOM, Inc.  
Node Development  
Department 2  
Yasuhiro Otsuka,  
Assistant Manager

## WILLCOM

### WILLCOM, Inc. <Corporation Introduction>

#### [Corporation Main Business]

WILLCOM, the only communication provider of PHS in Japan, offers its wireless data communication service with fixed charges and VoIP services through its independent and stable network and through approximately 160,000 cell stations located across Japan. The next generation wireless communication service with higher speed -- "WILLCOM CORE XGP" will be available in the autumn of 2009.

#### [Contact]

WILLCOM, Inc.  
URL: <http://www.willcom-inc.com/en/index.html>  
TEL: +81-3-5400-5770  
3-4-7 Toranomon, Minato-ku, Tokyo, 105-8477, Japan

needs could be met completely, Mr. Yasuhiro planned to purchase one sample machine for further testing, and then to purchase two more sets for commercial use very soon.

## "Shotgun" to "Canon"

When using self-developed tools, the total supported traffic (up and down) is limited to 300Mbps; The traffic, however, could reach 2Gbps after introducing the ClearSight Network Time Machine. In other words, we could only capture and test parts of the network traffic before, while now all the data can be captured and detected after using ClearSight Network Time Machine.

The system has another beneficial feature that Mr. Yasuhiro appreciates very much. "What differentiates us from other users when using this product is that we also need to process the unique protocol between PHS and gateway. Previously, lots of time and effort had to be spent sampling the data based on the unique protocols from volumes of other data. Network Time Machine's filtering function, besides the above two features, can achieve that goal," Mr. Yasuhiro said. It can extract the required packets from a huge amount

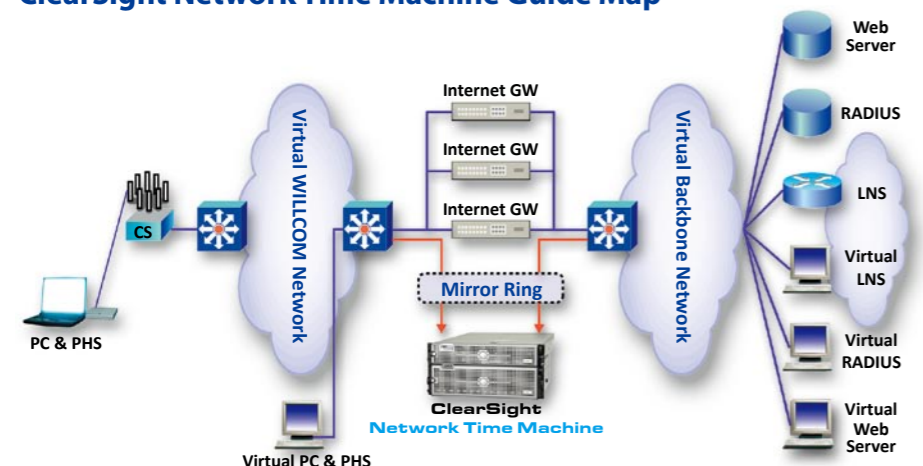
of data stored in the storage unit (hard disk) when processing data decoding, and then display them as trace files.

Before introducing the system, they investigated many products and solutions of other companies as well. However, concerning the later maintenances and services, they choose Toyo finally. In fact, "as long as we contact their sales manager when problems occur, we can get feedback from their system engineer very quickly. It is a great help for us to have such effective cooperation between salespersons and technicians," Mr. Yasuhiro praised.

Mr. Yasuhiro also showed his interest in the company's coming 10-Gbps release. "It would be a big step in practicability if their products could realize 10-Gbps packet sniffing at full line rates" he said.

Viewing next generation data communications, the network data volume will increase inevitably. ClearSight Network Time Machine will be a powerful partner for communications carriers who intend to face new business challenges under this trend.

## ClearSight Network Time Machine Guide Map



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