

Toshiba provides high performance process simulators, systems that enable high security performance and processing at higher speed and products with high reliability and robustness in order to realize provision of service "anytime and anywhere in a safe and precise manner".

## ArrayFort™ AF3500 Disk Subsystem

The AF3500 is a high-end model in the RAID (Redundant Array of Independent Disks) subsystem ArrayFort™ series. It was developed as data storage for large-scale computer systems.



The ArrayFort™ series AF3500 model

It can store a maximum of 4.4 Tbyte (T: 10<sup>12</sup>) of data and adopts a 2 Gbps fibre-channel, which can transfer data twice as fast as the previous model.

The AF3500 is the first product of this class to incorporate a differential data management function in order to achieve improved SAN (Storage Area Network) features. The function can shorten the data backup period sharply by copying only updated data.

## TC-1000 Facer-Canceller



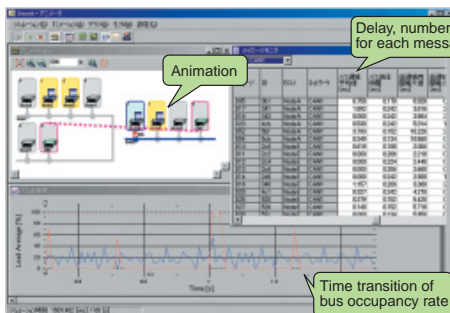
The TC-1000 facer-canceller

The TC-1000 is a highly competitive automatic mail preparation system designed for the global marketplace. Design features, such as flexible customization capabilities for each Postal Agency, high processing speeds (not less than 40,000 letters per hour) and low noise mechanical systems (not more than 67 dB) are realized. Toshiba's high cost-performance design technology, which is a major factor in our present predominant market position for domestic mail processing systems, has also been applied in the TC-1000, making the TC-1000 a truly attractive choice.

This mail facer-canceller machine, the TC-1000, extracts individual letters from the input mail stacker feeder, detects and recognizes stamps or other postal indicia on their surface, faces them according to this indicia position, then cancels stamps (according to indicia), and sorts them by type according to programmed instructions. The main features of the TC-1000 are as follows:

- Flexible customization composed of basic modules
- Low noise mail-feeder mechanisms that control friction
- Postal indicia recognition by image processing

## Development of CAN Model Simulator



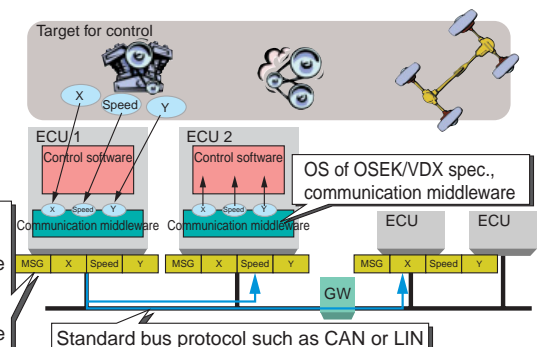
Network simulator screen

These days the number of ECUs (Engine Control Units) onboard vehicles continues to increase along with the greater complexity and higher functionality of vehicle control, and the introduction of networks in the vehicle used to connect between these ECUs has started in earnest.

The CAN (Controller Area Network) model simulator is able to simulate and display working ratios, delay duration, number of collisions, cyclic variation rates and the transmission buffer detention status of transmission messages that flow over the CAN, which is a communication protocol for networks onboard vehicles. Because this simulator is used at the upstream design stage before completion of the actual ECU machine, it is possible to optimize the network on the vehicle at an early stage and we anticipate improvement of efficiency in design operation.

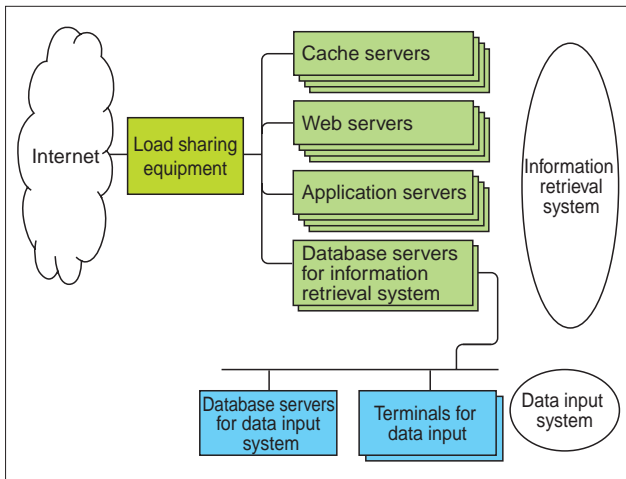
MSG : Message  
 OSEK/VDX : Offene systeme und deren schnittstellen für die elektronik im kraftfahrzeug/vehicle distributed executive (German)  
 LIN : Local Interconnection Network  
 GW : Gateway

- Data transmission between ECUs by
- Direct transmission mode
  - Periodical transmission mode
  - Mixed/transmission mode



Network architecture in vehicle

## Online Public Announcement System for the Supreme Court



Configuration of public announcement system

This system provides citizens with information relating to public auction of property conducted by the Japanese government (e.g. property descriptions, valuation statements, investigation reports) via the Internet.

Before the installation of the system, people had to visit the District Court in person and wait in line in order to browse the information. This innovative system enables people to access the information at any time and from any location.

One of the essential system requirements is to handle 180,000 hits per hour on the Web page.

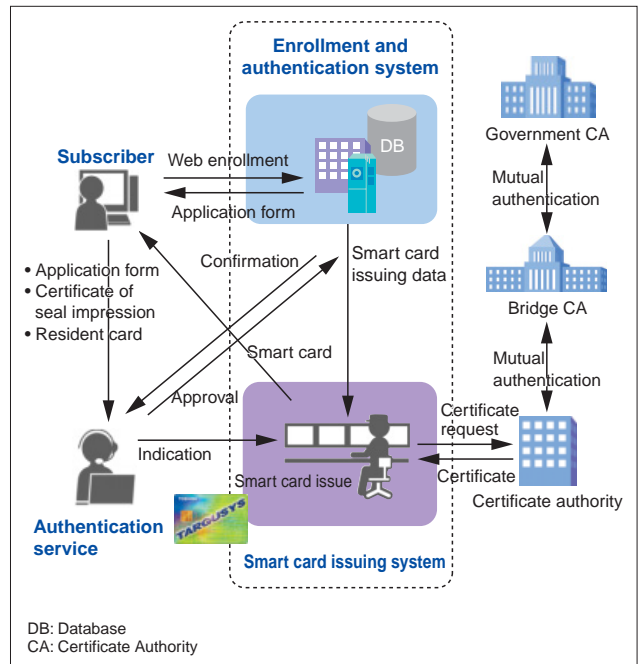
The system is comprised of 14 servers for Web, cash and application.

These servers are connected to 2 load sharing units in an effort to handle the heavy access load.

The system was also designed to be divided into a data entry segment and information retrieval segment, which has 2 parallel database servers, for concurrent access load sharing.

The features above allow the system to respond to 100 concurrent users within 2 seconds.

## Smart Card Issuing System Suitable for Electronic Government



Smart card issuing system for electronic government

Toshiba has developed a smart card issuing system suitable for electronic government to be used for electronic bidding based on the electronic signature law.

For electronic bidding by the electronic Japanese government, we need authorization for authentication services and mutual authentication with Japanese government public key infrastructure (PKI).

Toshiba has developed a special version of the Toshiba smart card issuing system TARGUSYS™ that can provide authentication service as an ASP (Application Service Provider) as well as including necessary functional elements for both authorizations.

Further development is anticipated in the future for authentication services.

*"TARGUSYS" is a trademark of Toshiba Corporation in Japan.*