

MOST Based In-Car Entertainment Network Controller

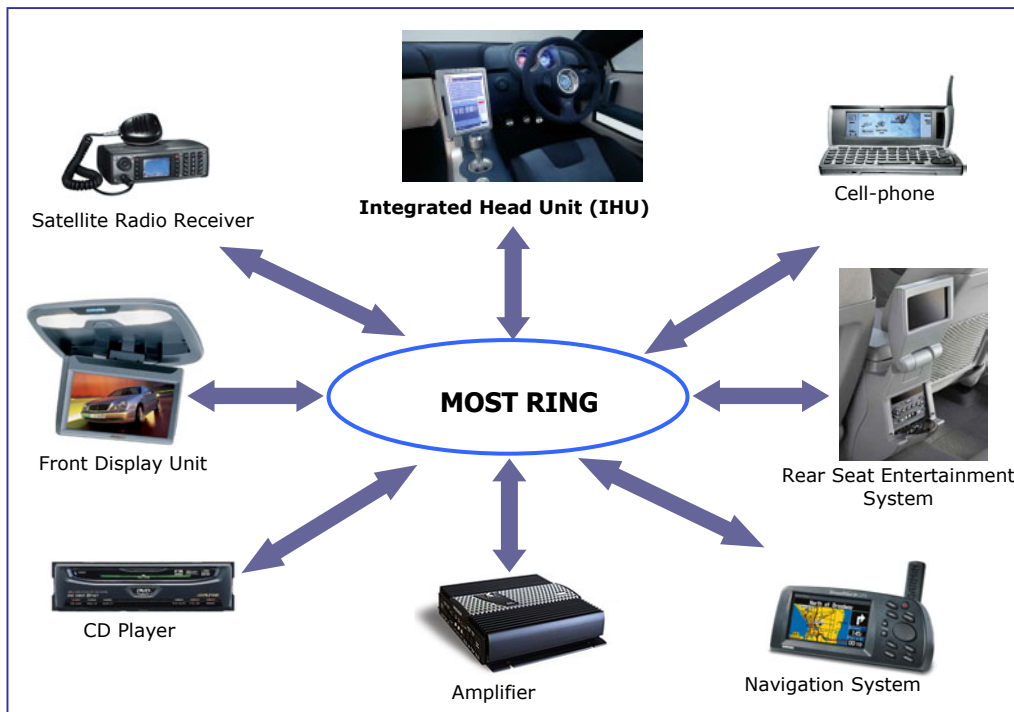
The customer is a leading Japanese automobile infotainment products company. They wanted us to develop a N/W Controller (Integrated Head Unit - IHU) as per the specifications of a European car manufacturer.

Business Objective

With devices getting mobile day-by-day, more and more of them are finding place in your automobile. You can now enjoy digital music or watch DVD movies in your car, the GPS system would tell you in which part of the world you are, the satellite communication device lets you to talk to any place in the globe. Using mobile phone in car with out hands-free itself is a hassle, just imagine how you are going to control 5 or 6 different devises. Car manufactures are looking at ways to simplify your life by developing a simple control unit for all these complicated devises.

MOST is the next generation optical fiber bus for in-car entertainment networks. It gives a single common infotainment bus for all the devices, which could possibly be used inside a modern car. So, the Entertainment system becomes extremely easy to design, develop and maintain.

System Overview – Challenges and Solution



We have developed a IHU that interfaces various entertainment and communication devises (slave modules) inside an automobile. The controller was developed based on MOST (Media Oriented Systems Transport) specification. The IHU is responsible for all the low level controls of the vehicle and the entertainment system resources allocation. The

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IHU software has the basic routines required for MOST ring construction, Control Message Service, Application Message Service and Ring Break Diagnosis features. Also, it has the control tasks for all the slave units that could be plugged into the automobile's host system. The major slave units are High Level Display Front (HLDF), Rear Seat Entertainment System, Radio, CD/MD Player, Telephone, Satellite Radio Receiver, Amplifier and Navigation System.

Development Platforms/Tools

H/W & S/W : NEC V850 32 bit Micro Controller board./ In Circuit Emulator
NEC Integrated Development Environment.

Oasis OS8104 MOST Transceiver, Oasis MOST NetServices Library.

Test Tools : Oasis Optolyzer for MOST Professional., MOST Interface Box.