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COMPARISON OF TWO TYPES OF OSEK NETWORK MANAGEMENT

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ABSTRACT - As the number of electronic control units (ECUs) in vehicles increases, ECUs can create a large and complicated in-vehicle network. Therefore, in-vehicle networks need a network management algorithm for improved reliability. The Open System and Corresponding Interfaces for Automotive Electronics/Vehicle Distributed Executive (OSEK/VDX) set a goal of being the industry standard for real-time operating systems used in vehicle systems. OSEK/VDX includes a reliable network management algorithm, OSEK Network Management (OSEK NM). It has two types of management mechanisms: Direct NM, and Indirect NM. These have opposite characteristics and different management performance. This paper explains the effective factor of network management performance, and proves it using a real application experiment. Direct NM and Indirect NM are implemented to Controller Area Network (CAN), and performance is analyzed using real applications. The result of this paper contributes that as a case of network situation, application engineer selects two types of OSEK NM for the best performance.