

ABSTRACT

Computer, communication unit including such a computer, railway management system including such a unit, and method for enhancing data reliability in a computer

This method for enhancing the reliability of data in a computer (6), the computer (6) being capable of providing an output datum (Ds) from an input datum (De), and including at least two data processing modules (12A, 12B), and a computing member (14) connected to each processing module (12A, 12B), comprises a step for computing, with each processing module (12A, 12B), an intermediate datum (D_{IA} , D_{IB}) from the input datum (De).

The method comprises the following steps:

- calculating, with each processing module (12A, 12B), an intermediate security code (C_{SIA} , C_{SIB}) from the corresponding intermediate datum (D_{IA} , D_{IB}),
- transmitting to the computing member (14) with each processing module (12A, 12B), the intermediate security code (C_{SIA} , C_{SIB}) and the intermediate datum (D_{IA} , D_{IB}),
- computing, with the computing member (14), a security code (C_S) from the intermediate security codes (C_{SIA} , C_{SIB}),
- selecting, with the computing member (14), an intermediate datum from among the received intermediate data (D_{IA} , D_{IB}) the output datum, (Ds) of the computer (6) comprising the selected intermediate datum, and
- transmitting to a receiving device (8), with the computing member (14), the security code (C_S) and the output datum (Ds).

Fig. 1