Towards Dependability Engineering for Cyber-Physical Systems using Digital Dependability Identities

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The open and cooperative nature of Cyber-Physical Systems (CPS) poses a significant new challenge in assuring dependability. The DEIS project addresses this important and unsolved challenges by developing technologies that form a science of dependable system integration. In the core of these technologies lies the concept of a Digital Dependability Identity (DDI) of a component or system. DDIs are composable and executable in the field facilitating (a) efficient synthesis of component and system dependability information over the supply chain and (b) effective evaluation of this information in-the-field for safe and secure composition of highly distributed and autonomous CPS.