Abstract

After a general overview of the already existing initiatives concerning coordination and optimisation for both administrative and handling services within the European ports, and an interview of experts in the maritime industry, this master's thesis constructs an e-PortCall infrastructure with digitalisation and automation in mind. The infrastructure allows for transparent navigational data exchange between ships and the shore. Building on the modular and uniform characteristics of e-PortCall, a concept for smart navigation has been created. The SmartNav system introduces object models together with a visual representation in AR for sea-going vessels visiting the Port of Antwerp. e-PortCall and SmartNav give a first step towards a digital infrastructure and smart bridge for an improved port call process, a subject which, thus far, still remains open for further technological advancement.