PIANC & PIANC RIS guidelines

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content

- Historical background RIS
- PIANC and the RIS Guidelines
- Evolution of RIS,
  - the challenges and
  - RIS towards multimodal information Services
Origin of River Information Services

- Initial research in the context of the “sharing information”
  - Research on the technology and possible impact of providing vessel traffic management information via ICT (“shore based radar on board”)

- Initial research on the benefits of maritime developments for inland waterways
  - Synergy between the maritime concept in previous century (VTMIS) and RIS
  - Usability of AIS and ECDIS in inland waterways
Historical context

• The EC supports since 1996 RIS research projects and implementation studies
• PIANC installed a working group on River Information Services in 1998.
• Central Rhine Commission (CCNR) installed in 2004 a RIS working group and formalized the PIANC RIS guidelines and RIS standards
• UN ECE and Danube Commission followed the initiative of the CCNR.
  – Applicable to all waterways of class IV or higher
  – Binding rules for authorities on the implementation of RIS
• River Information Services are nowadays in an implementation stage in North and South America, Europe and Asia
PIANC working group on River Information Services

- PIANC installed in 1998 the first work group on River Information Services in cooperation with IALA
- The Permanent working group on River Information Services (PWG125) is working now on:
  - Status report of implementation of RIS in USA, Asia, South America and Europe
  - RIS related definitions 2018 edition 2
- Members from USA, Russia, China, Vietnam, Austria, Belgium, France, Hungary, Germany, Poland, Netherlands, Czech Republic, Spain and CCNR.
RIS LifeCycle and the PIANC RIS Guidelines

- 1996-2005: focus on research and development
  - PIANC RIS guidelines edition 1 and 2 based on research results in European context

- 2005-2010: focus on technologies

- 2010-2015: focus on traffic management related services
  - PIANC Guidelines 2011 edition 3 based on experiences on implementation of RIS key technologies and initial basic services

- 2010-2020: focus on traffic & transport management services
  - PIANC Guidelines 2018 edition 4 based on world wide experiences on implementation of services
  - Development of Corridor Management
  - Synergy and benefits of e-Navigation for RIS

- 2020-2030: Information services in a multimodal transport world.
The evolution of RIS and the RIS guidelines

Late 90’s
Start of digitalization in inland navigation

Technology driven – Implementation focused

Process driven – User focused

Paradigm shift in the RIS Guidelines required!

RIS Guidelines 2004

- Start of digitalization in inland navigation
- Paradigm shift in the RIS Guidelines required!

RIS Guidelines 2004

- Technology driven – Implementation focused

RIS Guidelines 2011

- Interoperability
- Governability
- Accessibility

RIS Guidelines 2011

- Digital inland waterway area

RIS Guidelines 2018

- E-navigation
- Blockchain
- Internet of Things (e.g. AtoNs)

RIS Guidelines 2021

- Single Window
- E-navigation
- Blockchain
- Internet of Things (e.g. AtoNs)

DINA

Digital inland waterway area

Implementability
Feasibility
Quality

RIS enabled Corridor Management

Electronic transport documents

Autonomous sailing

Interoperability
Governability
Accessibility

RIS enabled Corridor Management

Electronic transport documents

Autonomous sailing

RIS Guidelines 2011

- national RIS implementation

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RIS Guidelines 2011

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AIS

ECDIS

new sensors

RIS Index

AtoN

ERI
Some conclusions w.r.t. the RIS Guidelines 2018

• The RIS guidelines version 2018 will be more globally oriented as the RIS guidelines 2011 and earlier versions are too much focused on Europe.
• e-Navigation is a maritime concept relevant for inland navigation, the synergies between RIS and e-Navigation are to be deployed.
• Further development of RIS towards multimodal information services is required for the benefit of inland navigation as important mode in the transport chain.
• The working group proposes PIANC to install a special working group on ITS for inland waterways.
• There are many developments which are challenges for the RIS domain in the coming years and they require attention of the RIS community.
challenges

- Standardisation, interoperability, interconnectivity and proprietary solutions
- Improve the quality and reliability of traffic and transport data
- Innovative solutions (IoT, Blockchain)
- Short and medium term solutions (autonomous sailing)
- Privacy and building confidence, stakeholder acceptance (“legal” issues)
- Cooperation between private & public partners
- Cybersecurity
The next RIS step: Intermodal Transport Information Services
Multi-modal cloud for traffic and transport information services

Open information infrastructure with role based access for registered and controlled information sharing
Questions?
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