

# **WGRISK Technical Discussion**

## **PSA Experience in Modelling Digital I&C**

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# Background

- Previous WGRISK Activities on Digital I&C
  - NEA/CSNI/R(2014)16, WGRISK Task DIGREL - Failure modes taxonomy for reliability assessment of digital I&C systems for PRA
  - NEA/CSNI/R(2009)18, Report on "Digital I&C Risk"
- Computer-based Systems Important to Safety (COMPSIS) Project (2005 – 2011)

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# Objectives of Discussion

- Share information on current status of Digital I&C PSA
- Identify gaps that could be addressed by WGRISK
- Formulate path forward (e.g., potential CAPS)

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# Agenda

1. Nordic experience from the MODIG project (M. Porthin, VTT, Finland)
2. Slovakian experience in modelling digital I&C (V. Sopira, RELCO; Slovak Republic)
3. Digitalized NPP risk assessment research status in Korea (H.G. Kang, KAIST, Korea)
4. Risk-informed Statistical Testing for Digital I&C Systems (K. Coyne, NRC, USA)
5. Achieved and planned advances of Digital I&C modelling in Flamanville EPR PSA (R. Quatrain, EdF, France)
6. Modelling digital I&C in PSA – German experience (E. Piljugin, GRS, Germany)
7. Brief overview on ICDE data collection rules for I&C components (E. Piljugin, GRS, Germany)

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# Some Discussion Questions...

- What knowledge gaps are not being addressed?
- Does the PRA community have access to sufficient operational event data? If not, what can we do to help?
- Approaches for continued information sharing?
- Potential future WGRISK activities?

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# Activity Success Factors

- Wide interest, sufficient motivation, sufficient number of volunteers
- Some activity already in progress
- Scope is not too wide and clearly defined
- Limited risk of overlap with other international activities.
- Task members have sufficient competence
- Common ground for communication
- Appropriate resources available?
- Sufficient number of volunteers?
- Task is limited in time