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Development of Value of Information Tool for Inspection Planning

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Inspection planning is an integral part of offshore structure asset management. As consequence of the low price of oil, inspection planning has again become the focus of structural reliability research. The decision theory, especially Value of Information (VoI) theory, has been widely applied to optimize inspection planning to lower the service life costs. However, utilization of VoI theory can be computationally demanding due to exponential growth of the decision tree. With this poster, an efficient VoI analysis tool called VoI Calc is introduced. The tool is able to solve moderately complex decision problem and schedules inspection time efficiently. Demonstration of the VoI analysis with an example in inspection planning is presented.