

## ***Melody Advanced – System Engineering Modelling Tool***

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The Arcadia engineering method mainly focuses on functional analysis, complex architecture definition and early validation. It is highly extensible and customizable through viewpoints providing integrated specialty engineering support. Both the method and the Melody Advance tool supporting it, are already operationally deployed within Thales, with hundreds of daily users worldwide, on critical operational projects. Melody Advance and Arcadia method will be released under open source license, in 2015, within Polarsys Project under Capella name.

This approach has been applied in TAS avionics department, to model a Data Handling unit, SDIU, (RTU type unit). The objectives to get an early IRD and SW specification controlling this unit were successfully achieved. Moreover, early validation of the protocol at SDIU level was performed using test cases coming from the model.

This achievement was made possible because of co-engineering team involving Data Handling engineers, SW designers and SDIU designers.

Perspectives are model usage extension to specify the operational simulator, to optimize the missionisation process (parameterization with SDB), and to prepare the Validation and Qualification activities (traceability, test scenario definition), covering a complete avionics..