

Siemens Wind Power A/S Borupvej 16 7330 Brande DENMARK

Att: Akhilesh Shukla

Quote No.: CON-17-SIE-002

Version: 1

Date: 2017-11-01 **Quote valid until:** 2017-11-30

Our reference: Erik Holmen Olofsson

Sales Manager: Mark Milton

Proposal for Technical Services

With reference to previous communication we hereby propose the following offer for Technical Services in ANSYS.

Background - EDRMedeso

EDRMedeso is one of the leading suppliers of technical software solutions in the Nordic countries, offering a complete range of CAE products. EDRMedeso was founded in 2012 through a merger of EDR AS and Medeso AB. EDR was founded in 1986 specializing on delivering software and technical services to our customers. During the last 26 years the number of customers has been steadily growing, and lists today more than 500 companies. Among these are major companies within the oil & gas, offshore, aerospace, automotive, construction, defense and shipping industries.

Our focus for providing technical services is on high-end applications such as highly nonlinear analyses, multi contact problems, transient heat transfer analyses, fatigue, dynamics, computational fluid dynamics (CFD) and fluid-structure interaction (FSI) computations. Our technical team has experience from a broad range of industries.

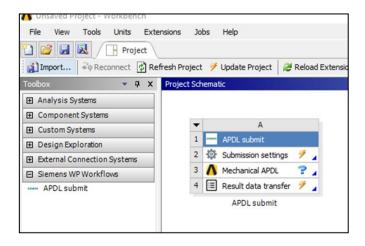
Building a manual submission application for ANSYS Workbench

The work at hand is to build a app representing a component system in Workbench, that enables manual submission of apdl projects via RSM to the cluster.

Suggested Approach

Based on previous communications and the received information we will suggest the following strategy for the work in question:

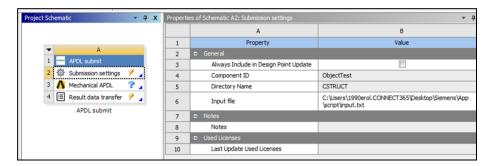
A new app is created, that enable a new component system in Workbench:



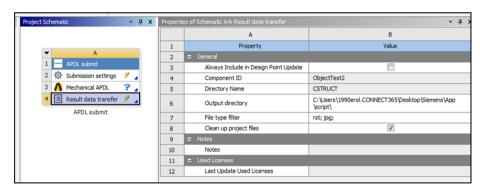


The system consists of three cells:

1. First cell enables pointing to an APDL input file. When cell is updated, the file is designated as input file for the "Mechanical APDL" cell. A filtering cell should also be added to allow filtering of files sent to the cluster. No filtering would imply all files in the same directory as the input file, to be included into the project.



- 2. Second cell is a standard APDL component enabling RSM submission settings.
- 3. Last cell enables referencing a designated output directory, where the result files are exported after the solution is completed. File type filtering enables filtering of files to be exported, with no filtering implying all files exported to the designated location.



Project Period

TBD

Summary of Costs

The rates for the proposed work can be summarized as follows:

Consultancy rate: 1250 DKK ,-



All rates are excluding taxes and traveling expenses. EDRMedeso will invoice the work carried out at the end of each month.

The <u>estimated time and cost</u> for the work is summarized in the table below. Please note that these are estimates and may change if unforeseen challenges or changes to the described scope arises. An estimated increase in cost will be reported as soon as discovered.

Step	Activity	Rate (DKK)	Number (Days)	Total Cost (DKK)
10	Workbench APDL submission application			
	Application Developement	10.000	3	30.000
	Report and Project Management	10.000	1	10.000
	QA	10.000	1	10.000
	Total estimated time and cost			50.000

Additional work can be ordered with reference to the current quotation and will be charged by the actual hours.

Deliverables

After completion of the project, the following deliverables can be presented to Akhilesh Shukla and Daniel Maldgaard.

- A short manual describing how to install and use the application.
- All simulation files and scripts that are developed during the project will be handed over after completion of the project work.
- The developed application for one specified ANSYS version. This quote does <u>NOT</u> include technical support, maintenance or upgrade for other ANSYS versions. However, this can be ordered based on standard consultancy rates.
- Upon request, specialized training in performing similar analyses in ANSYS can be provided according to our standard rates for customized training.

Resources

For this proposed project EDRMedeso will, if needed, allocate the following personnel:

- Technical Services Manager: Erik Holmen Olofsson
- Senior Engineering Consultant: Magnus Gustafsson



Limitation of liability

EDRMedeso shall be liable with respect to the contractual delivery in accordance with the general terms in this contract. Any further liability under this agreement, in particular for indirect or consequential damages or loss of profit shall be excluded except where liability is legally compulsory.

EDRMedeso's liability with respect to the delivery in this contract is limited to the insurance payment pursuant to third-party insurance contract nr. 440021640 with Codan and shall under no circumstances exceed the total contract sum in this contract.

If the quotation is accepted, please return a signed copy of this document or a company Purchase Order to erik.olofsson@edrmedeso.com.

Best regards,			
Will X. Offin	It is hereby confirmed that the current quotation is accepted:		
Erik Holmen Olofsson	Date/Place/Sign		
Technical Services			
General terms:			

All prices are in DKK exclusive of VAT

Payment per 30 days

All information regarding prices quoted in this tender is confidential