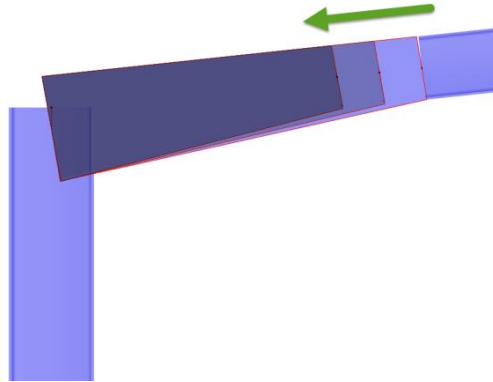




Structural Analysis and Design Software

Dlubal Webinar

Programmable COM Interface for RFEM/RSTAB



Dipl.-Ing. (FH) Andreas Hörold

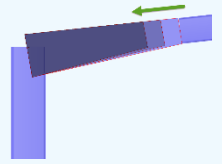
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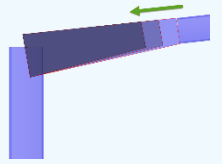
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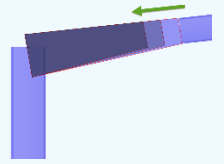
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Agenda

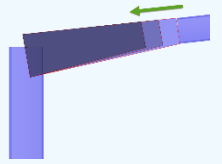
- **Features of the COM interface**
- **Principles of creating structural elements**
- **Interface to the STEEL EC3 add-on module with optimizing the length of a tapered beam**

What Is the RF-/RS-COM Interface?



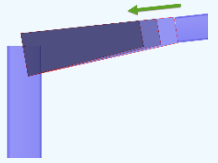
- **Programmable remote control for RSTAB/RFEM**
- **Create programs with VB, VBA or C#**
- **Edit/create the following elements:**
 - **Model data (nodes, lines, members, supports, ...)**
 - **Loads (nodal loads, surface loads, ...)**
 - **Load cases, load combinations, result combinations**

When Should I Use This Interface?



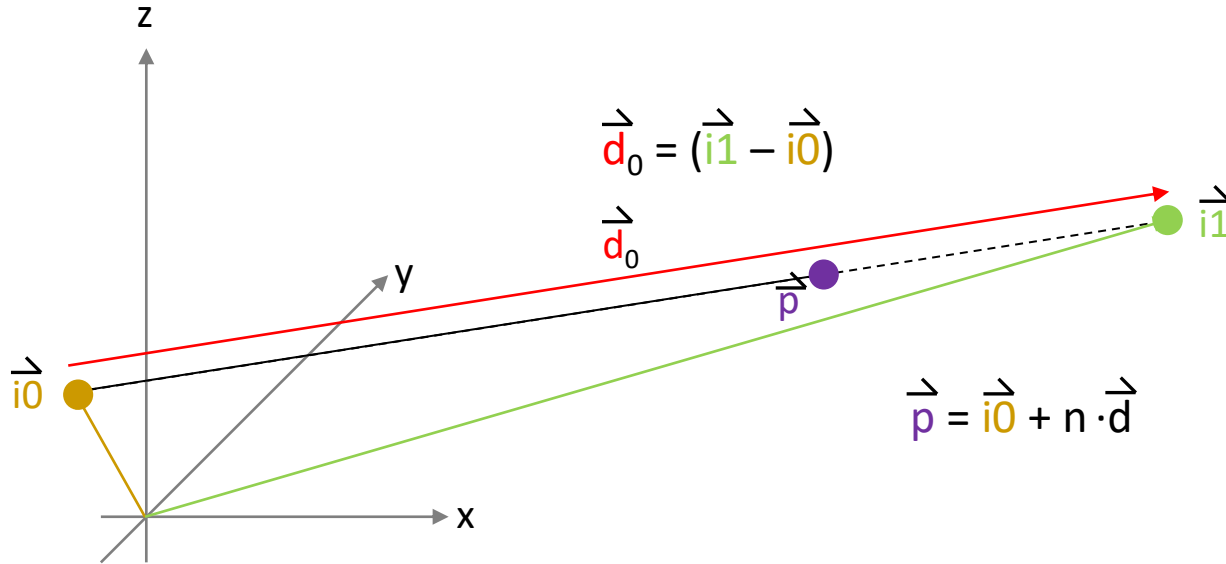
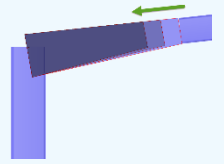
- **Creation of modular structures (e.g. racks, scaffolding)**
- **Automated tests/calculations (also possible in the background)**
- **Import/export of data (model data, loads, results)**
- **Creation of customized modules**

Procedure



- 1) **Connect to RSTAB**
- 2) **Get data from the selected member**
- 3) **Identify the node that can be moved**
- 4) **Connect to the STEEL EC3 add-on module**
- 5) **Calculate the case in the add-on module**
- 6) **Get the results from the add-on module**
- 7) **If the ratio is too low, shorten the member and return to point 5, otherwise continue with point 8**
- 8) **Extend the member again and exit the program**

Brief Explanation: Line Equation



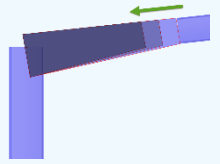
$$\vec{d} = 1/n_0 \cdot \vec{d}_0$$

mit

$$n_0 = |\vec{d}_0|$$

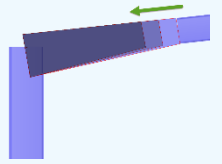
$$\vec{i1} = \vec{i0} + n_0 \cdot \vec{d}$$

Summary



- 1) **Connect to an open model in RSTAB**
- 2) **Select elements / export model data**
- 3) **Connect to add-on module**
- 4) **Perform the calculation**
- 5) **Export the results**
- 6) **Write model data**

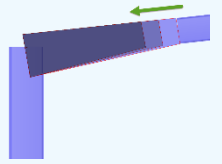
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- Contact our customer support if you have any questions (chat, email, phone)
- Get individual training sessions (online / at Dlubal / at your office)



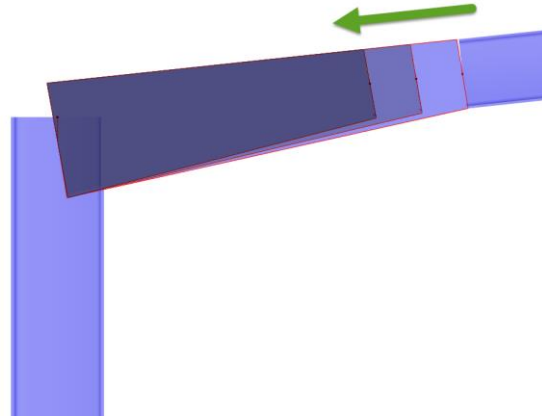
Where Can I Find More Examples?



- On your computer in the following folder:
C:\User\Public\Documents\Dlubal\SDK
- On the product page of the [RS-COM/RF-COM add-on module](#)
- Related FAQs and Knowledge Base articles



**Thank you for your
attention!**





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