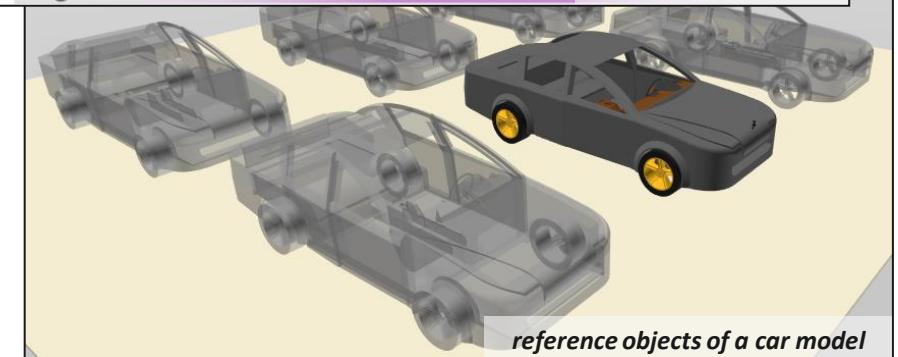
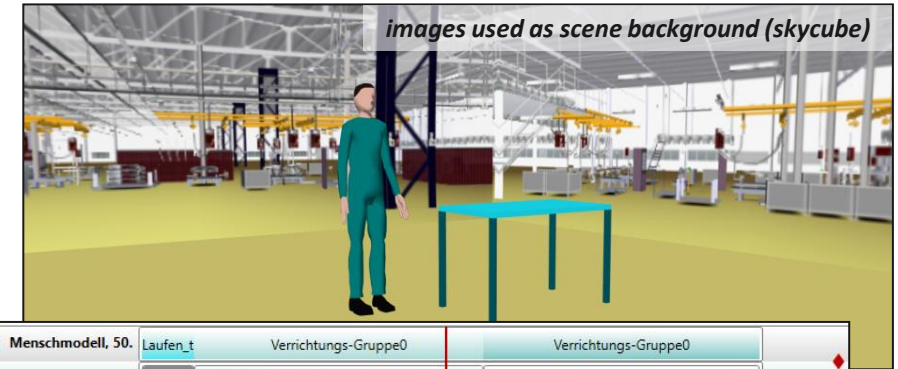
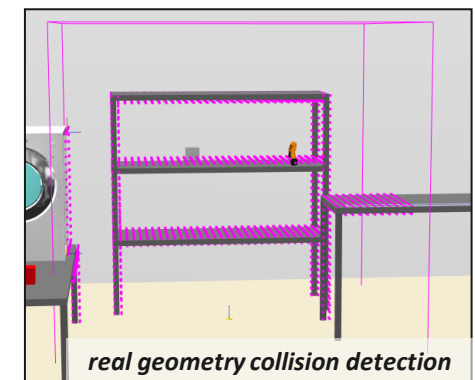
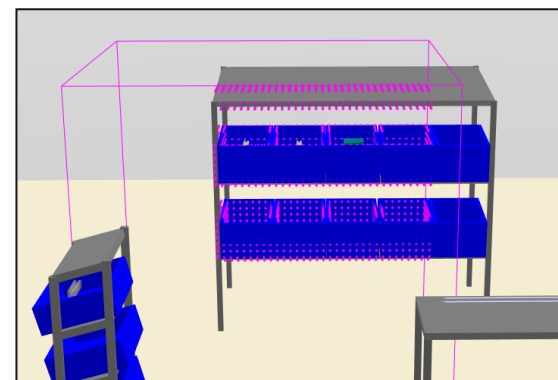
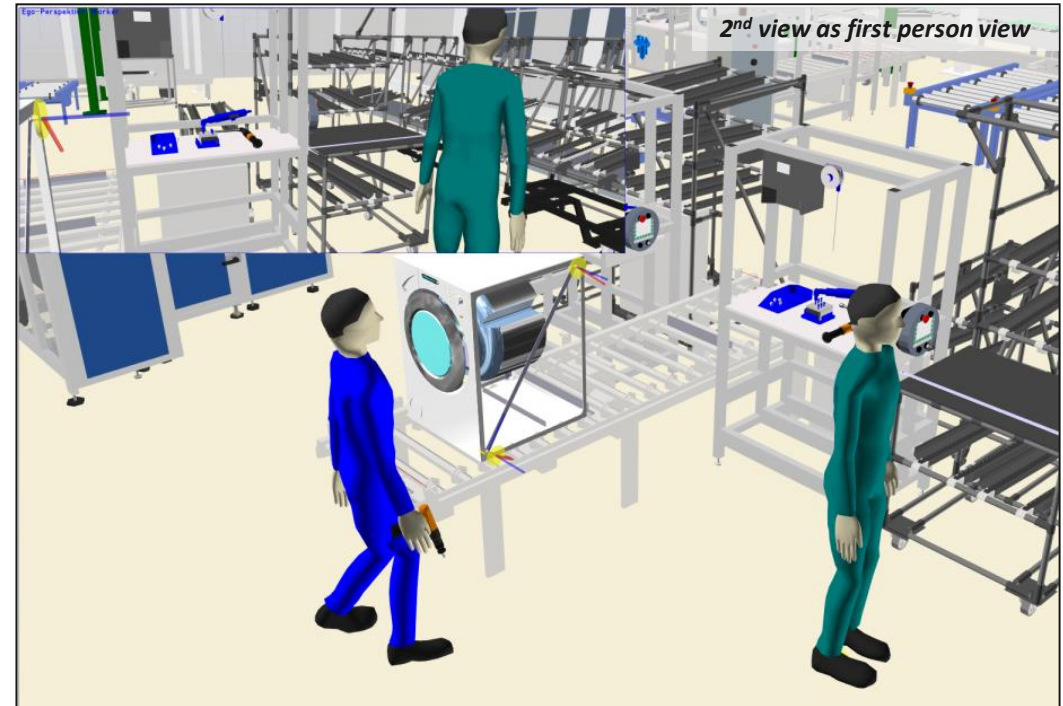


- can import **JPG, TGA & PNG** files as 3D objects
 - can be used for layout import, skycubes, labeling, ...
- introduction of **reference objects**
 - shallow object copies as alternative for deep object copies
 - performance optimization (don't require geometric file reloading)
- creation of **user defined complex tasks**
 - Includes creation & linking of user defined parameters
- **enhanced library functionality** especially for user defined libraries
 - user defined libraries can now keep objects with behavior as well as complex tasks
 - images and videos can be used as preview
- **new documentation & marking features**
 - includes in-place editing of names, colors & comments
 - available for objects & tasks tree



- enhanced **collision avoidance** functionality
 - for upper body and extremities of manikin
 - collision detection based on real geometry
- **2nd viewport** functionality
 - picture in picture mode
 - ego and bird's-eye view available
- **BVH motion data export** for manikins
 - enables motion data transfer to other systems
- new „**object report**“ in „results“ tab
 - provides overview of object properties
 - filter and summation (for costs) functionality
- **multiselection** enabled for task and object tree
 - most context commands now also work for multiple items



[Core] parameter "reverse path" added for task "walk to target"

[Core] task "push / pull" enhanced with automated sideward walking (if necessary)

[Core] task "push / pull" enhanced with parameters "target (grabpoint) left / right hand", "body movement type" & "lock leg movement"

[Core] initial distance check between actors and process locations implemented

[Core] object context commands enhanced for multiselection

[Core] status bars enhanced with tooltip (showing details like currently processed task)

[Core] object context commands "expand all (sub)nodes", "apply color on object", "fetch color from object"

[Core] creation of new task parameters via task context command "edit user defined parameters"

[Core] context menu added for parameters "create parameter link", "remove parameter link", "remove parameter"

[Core] collision object setting added in library for geometric primitives

[Core] automatic report calculation implemented

[Core] selectable resolution for video creation

[Core] dragging a human task into the timeline area without having defined any manikins will automatically create a default manikin

[Core] line balancing - reusing marker objects now always automatically creates copies

[Core] whenever an object is selected in 3d view "objects" tab will be activated automatically

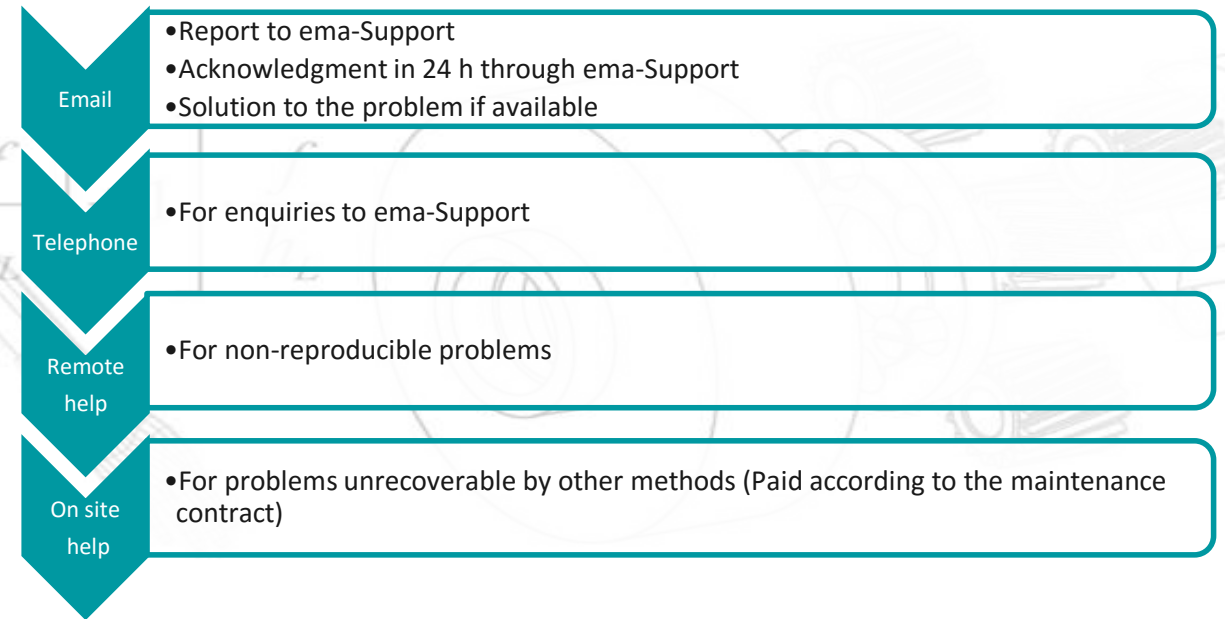
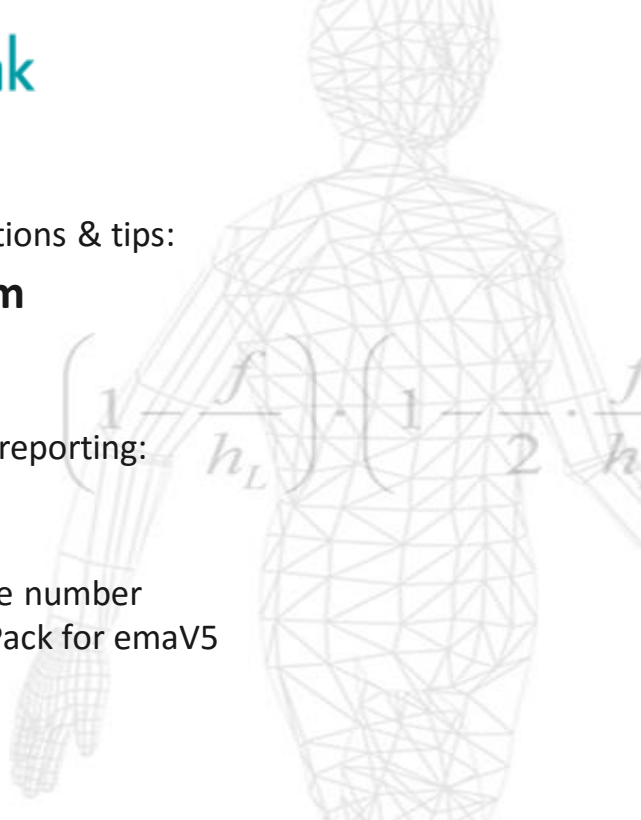
- time computation issue for translational DOFs solved
- visibility issue for cycle time chart solved
- task duration computation issue in case of stooping effected MTM-UAS is solved
- mass summation issue fixed for time analysis
- "type of tool movement" is now affecting complex tasks (screwing together & clipping) correctly
- issue in "prevent tilting" fixed

Contact address for errors, questions & tips:

support@imk-ema.com

Necessary information for error reporting:

- Customer number
- ema-Release number
- Contact person/ Telephone number
- DELMIA Release, Service Pack for emaV5
- Detailed Error description
- If possible sample data



imk ema, LLC

Contact - Germany

Gerson Heuwieser

Mobile: +49-172-765-1966

Gerson.Heuwieser@imk-ema.com

Contact - Worldwide

Uwe Knorr

Mobile: +1-503-780-2291

Uwe.Knorr@imk-ema.com