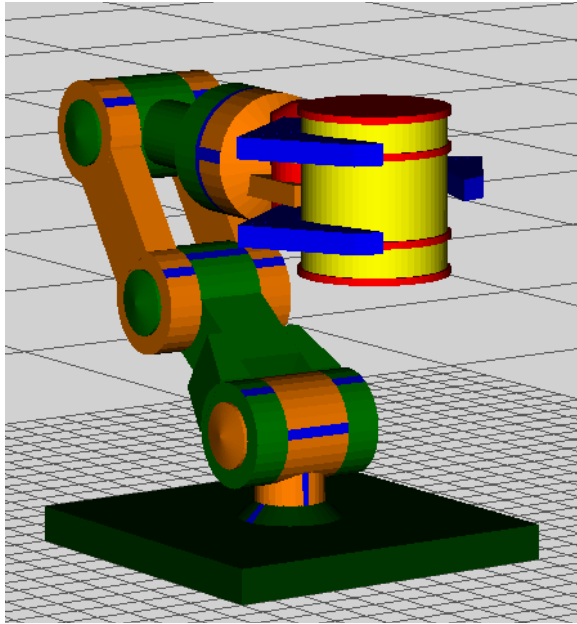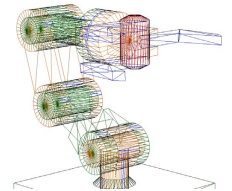# ibaAnimation-3D

In brief

- 3D-views of geometric objects, machines or plants
- Animation of objects with ibaLogic and ibaPDA-V6 measuring values, simulation and control data
- Interactivity via virtual control panel
- Processing of current or recorded data
- Interfaces to OPC and iba measuring files
- Import of standard 3D engineering data (dxf, stl)
- 40 behavioral parameters can be configured for each object
- Events can be viewed at the same time at different locations
- Improved analysis due to linking with ibaAnalyzer
- 10 Objects are free of charge
- Can be operated intuitively and is cost-effective

No object in focus

Description

With ibaAnimation-3D, you can create animated 3D views of plants and machine elements based on evaluated and measured data. The animated coordinates are position, rotation and angular position of the objects.

The views on the objects can be changed randomly during the running automation process. For having an optimum view at the process, the user can navigate around the objects on all three axes and zoom them in very close.

The advantage over an animation from a 3D construction program, lies in the capacity of the program to process real signals. The status of the plant can be represented by means of the measured signals exactly in time.

This is why ibaAnimation-3D is particularly suitable for the animation of plant and drive controls.

Standard interface for 3D objects

The objects you want to represent in 3D, can be imported via a standard interface. dxf (ASCII) and stl (binary) are accepted as import format. This way, the objects can also be created in a 3D design program or a CAD system. The market offers a lot of affordable tools that support these export formats, i.e. you can create 3D objects in a time and cost effective way. You can assign up to 40 behavioral parameters to the objects (you get 10 objects for free). The behavioral parameters are: position, rotation (rev./min), zoom and angle.

Interfaces for animation data

The data needed for control and animation are supplied by ibaLogic or ibaPDA-V6 via an OPC interface and linked to the behavioral parameters of the 3D objects by the drag&drop function.

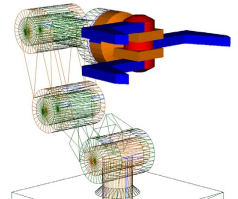### Live data from ibaLogic-V3 and ibaLogic-V4

With the ibaLogic automation system, you can use all input and output signals as well as no matter which intermediate values for animating 3D objects. Mechanical processes that are controlled by the ibaLogic software, can be illustrated clearly and checked. The virtual control panel in ibaAnimation-3D allows you to transfer nominal values or switching commands to ibaLogic for an interactive simulation.
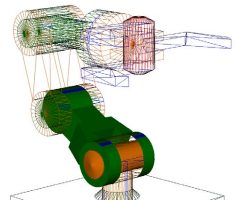
Live data from ibaPDA-V6

ibaPDA-V6 is an OPC server and generally supplies all measuring signals on an OPC level. This way, measuring signals can be processed for 3D animation. This is an interesting add-on to common 2D measuring curves.

Historical data from iba measuring files

You can not only use ibaPDA-V6 or ibaLogic live data for animation, but also recorded data from iba measuring files. ibaAnimation-3D has a special function by which it can choose in ibaAnalyzer the right measuring file (depending on the marker position) from a directory you have chosen before and hence adapt the animation.
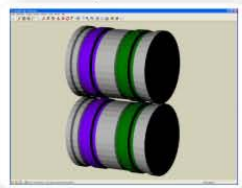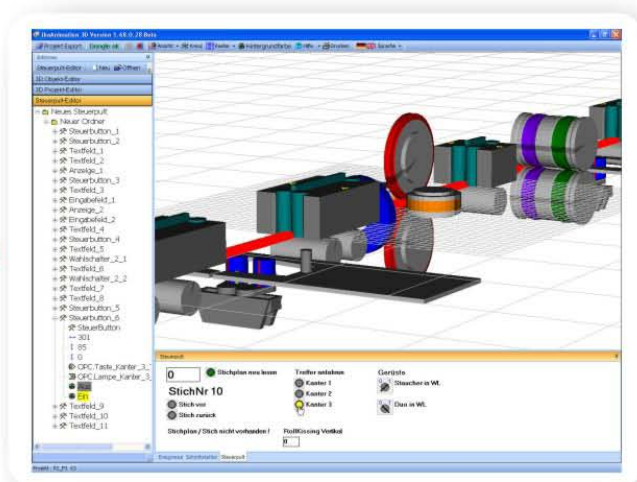

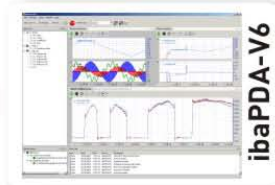Object 1 in focus

Object 2 in focus

Object data

Animation data

Virtual control panel

If manual configuration is needed for the control of a plant, but there are no control panel or HMI system, the most important operating elements are provided by the ibaAnimation-3D virtual control panel. There are illuminated pushbuttons, selector switches, text and value displays, value input field and sliders.

Operation

ibaAnimation-3D has an intuitive user interface and is easy to learn. You have got three editors at your disposal:

Editors

In the **object editor**, the objects are created and imported. You can define form and size.

In the **project editor**, the objects are assembled to a plant or machine. You can assign a position in the room and a behavior to the single objects.

The virtual control panel is designed in the **control panel editor**.

Window technology

All areas, relevant to the user, like editors, interfaces control panel and event protocol are docking windows. You can drag, dock, minimize and hide these windows freely on the screen.

Data model

The whole data model is stored on the harddisk as XML files. When storing, binary files necessary for the sequence of events and animation are generated. For fast saving, there is an export function. Animation models can be exchanged between different users.

User benefits

Simulation

Without a real process periphery, you can test control applications by simulating the process or the plant with an ibaLogic program. The control application can run on an ibaLogic system or on another automation system that transfers the relevant control signals to the ibaLogic simulation application via the right interfaces. Especially positioner and process controls can be tested before commissioning.

Process analysis and fault detection

Combined with iba measuring files, a real plant behavior can be simulated and viewed independently of the running process. By means of the variable object views, the process event can always be viewed from different perspectives.

Due to parallel representation of many parameters, relations between these can be seen easier and hence the causes of failures be detected.

Especially combined with other recording tools, like ibaCapture-CAM, you can perfectly analyze recorded pictures and signals.
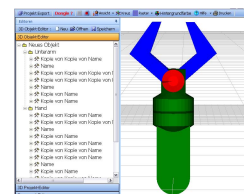
Training

When used for educational purposes in the field of automation technology/PLC, ibaAnimation-3D enhances motivation and makes things easier to understand.
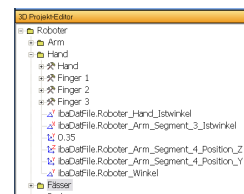
Staff can be trained for technology before operating a real device.

Acquisition

Suppliers of automation solutions can demonstrate technical competence by using ibaAnimation-3D and show impressing models during the acquisition phase or present projects live.

Object editor

Project editor

Measurement and Automation Systems