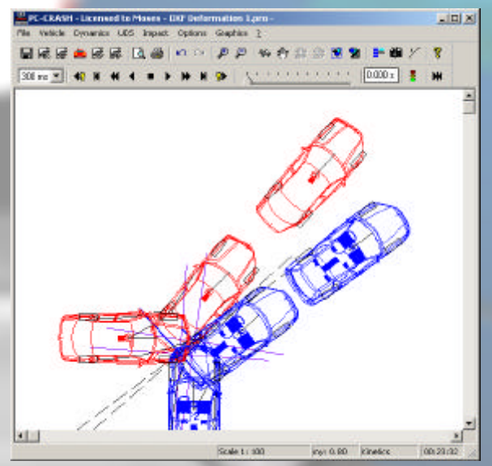
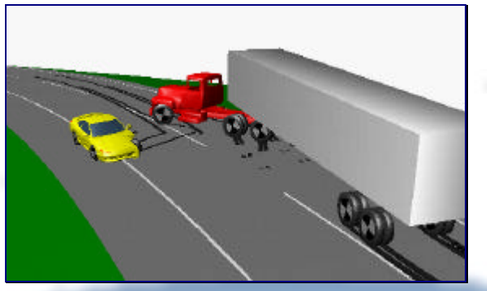
- Simultaneous simulation of up to 32 vehicles
- Calculation of distance/time relationship (different diagrams with measurement-capabilities)
- Automatic calculation of accident prevention potentials (e.g. accident avoidance velocity, necessary braking coefficients.....).
- Automatic rendering of video animations (Fixed and variable camera positions)
- Calculation of multiple collisions between several cars
- 3-dimensional impact model (based on Kudlich-Slibar)
- Automatic calculation of post collision movement until the vehicle's rest position
- Indication of point of impact separation speeds or coefficient of restitution in impact calculations
- Automatic calculation of primary and secondary collisions using default parameters.
- Automatic calculation of vehicle deformations based on the vehicle overlap and visualization of the deformations using DXF vehicle sketches

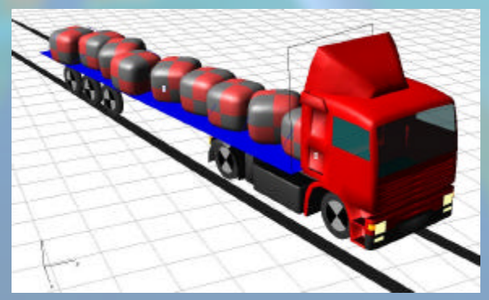


- The extensive and updated DSD 2003database is included (approx. 5000 vehicles)
- Interfaces to different vehicle databases (DSD, ADAC, Burg, Strouhal, Canadian Specs, etc.)
- 500 3-dimensional car shapes are included
- Project files are saved in the background, therefore there is only a minor delay when saving files
- Additional slip based tire model (TMEASY, Rill).
- Different vehicles outlines per car can be used time dependently (with and without deformations)
- Improved capabilities for textual output of the simulation results using the RTF-format (flexible text formating and direct export to word processing programs)
- All common traffic signs are include as a symbol library.
- 3D road objects can be generated easily to be used during the simulation.

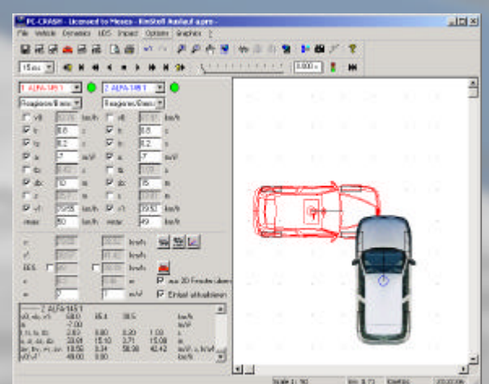
- Graphical indication of road slopes and friction conditions using polygons



- Simulation and impact calculation of truck / trailer combinations (steered trailers, unsteered trailers and semi-trailers can be modeled) using one or multiple trailers
- Simulation of movable load using the multibody system of PC-CRASH. Its influence on the vehicles driving behavior can investigated.

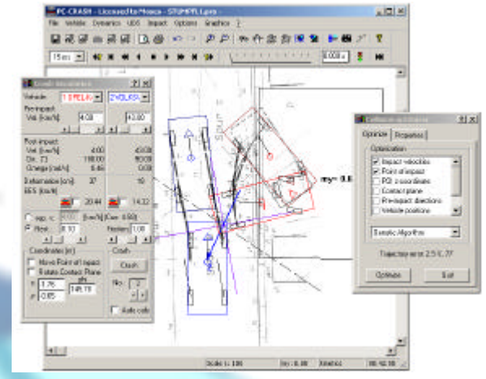


- Follow path option to be used for the kinetic simulation of vehicles and truck/trailer combinations
- Extended kinematic modules for fast calculations of pre-impact, impact und post-impact movement, additional modules for velocity-distance-time calculations including avoidance, kinematic pedestrian calculation and overtaking calculations

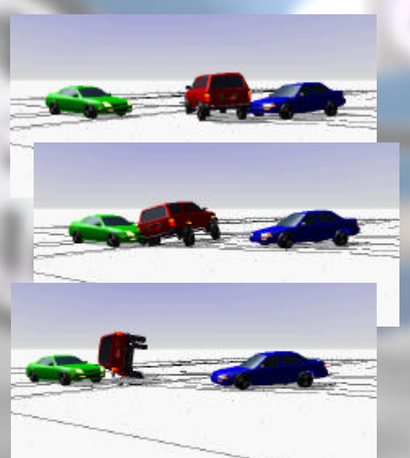


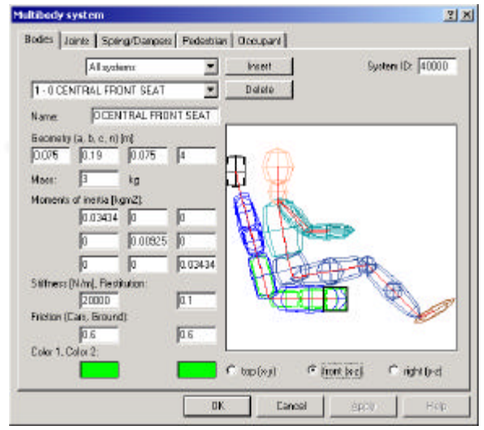
- The steering kinematics of buses and vehicles with trailer steering can be specified and are taken into account in the simulation.

- Automatic calculation of impact parameters (pre-impact speeds and point of impact location) with the collision optimizer using final stop positions



- Capability of defining and calculating brake force distributions between front and rear axle.
- Ground view photographs and scanned images of cars can used to represent the vehicles in the 2D window, approx. 500 ground view photographs of common cars are included.
- All collision parameters can be displayed and printed
- 3-dimensional perspective presentation using OpenGL (Silicon Graphics Graphicstandard on Win95 and Windows NT)
- DXF-sketches and Bitmaps can be used as an underlay for simulations
- Improved drawing program, an unlimited number of layers can be used in the drawing program. Simulation data, bitmaps and background drawings are organized in layers, which can be switched on and off individually.
- Undo & Redo – the last actions performed can be reversed.
- Consideration of road slopes and change in slope direction during simulation
- Improved rollover model

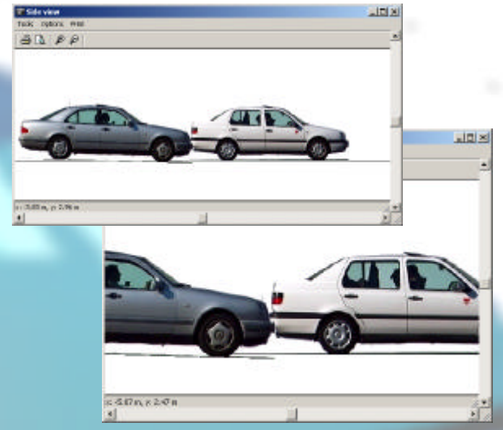




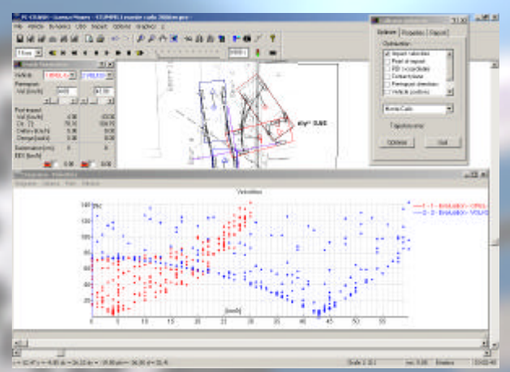
- Significantly improved pedestrian and motorcycle model (multi-body-model), the real vehicle shape is used in the calculation. Scaleable pedestrians by anthropometrical Data.
- Preprocessor to define and configure multi-body systems (pedestrians, motorcycles with drivers and occupants), multi-body systems can be modified and positions in a very flexible way.
- Calculation of occupant movements and loads with the PC-Crash multi-body occupant and seat model. Interaction with the car interior is taken into account
- Occupant simulation including seatbelts

- The output of simulation results as diagrams has been improved and is more flexible, diagrams can be exported as DXF-files and as Excel data sheets.
- Multiple bitmaps can be used in the 2D window, bitmaps can be joined.
- Interface to the MADYMO® occupant simulation program. Based on the PC-Crash simulation results for the vehicle movement the occupant movement and stress levels can be calculated directly.
- User defineable printout in the values window
- Improved 3D visualization for vehicles and environment using DirectX, which supports all common 3D hardware accelerator graphics cards.
- User definable printout format in the values windows, document templates with placeholders for significant output values can be generated by the user.

- Simulation of car movements where the vehicles are attacked by wind forces.
- Visualization of different visibility conditions like fog
- Side view window to determine contact locations and contact heights especially for serial collisions

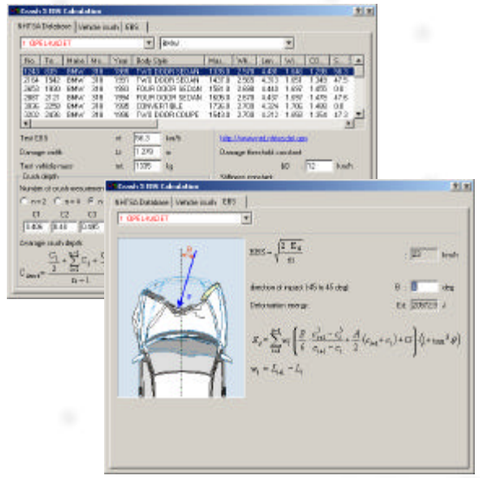


- A DDE interface to all office applications is available, which can be used to exchange data and results with PC-Crash. Calculation sheets can be designed in any office application and the data fields are filled by PC-Crash.
- Calculation of real vehicle accelerations due to engine power and air resistance
- Calculation of bandwidths for the input parameters of the simulation using the „Monte Carlo“ optimization algorithm. Tolerances for each input parameter can be determined for a given accepted overall trajectory error.

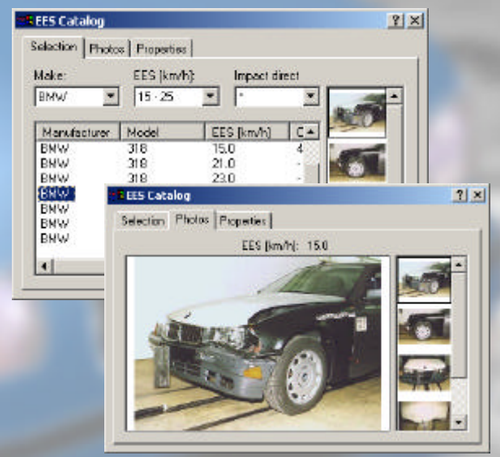


Hardware Requirements:

Processor:	Pentium or higher
User Interface	Wind. 98/Me or NT/2000/XP
Memory:	RAM ≥64 MB
Graphic card:	VGA 800 x 600 Pixels, 16 or 24 BIT colours



- The Crash III module for EBS calculations based on the vehicle damage and the NHTSA crash database are included.
- A DDE interface to all office applications is available, which can be used to exchange data and results with PC-Crash. Calculation sheets can be designed in any office application and the data fields are filled by PC-Crash.
- Implementation of an EES catalog as a tool for the impact calculation



PC-Crash Light 2D

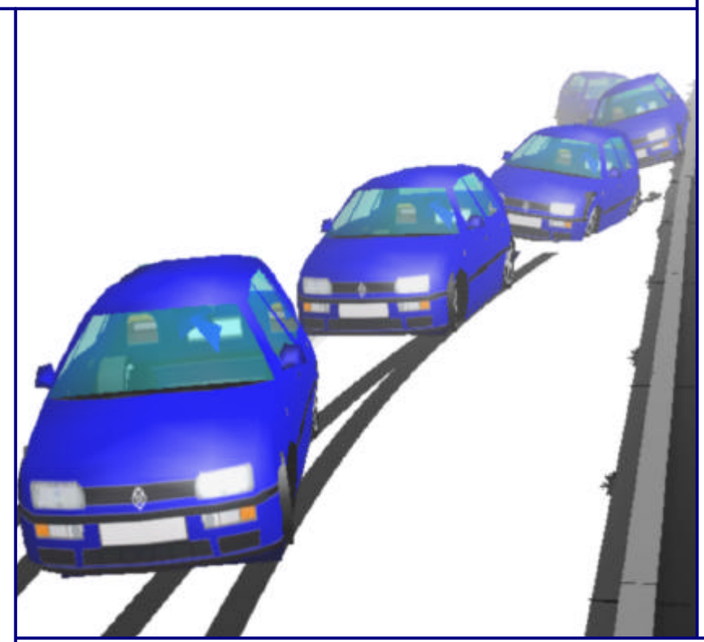
- Simulation of 2 vehicles
- 2-dimensional view
- No trailers included
- Without multibody models

Prices excl. VAT:

PC-Crash Expert 3D	EUR 3.600,00
PC-Crash Light 2D	EUR 2.000,00
EES Katalog Dr. Melegh	EUR 240,00
Madymo® for PC-Crash	EUR 2.680,00

DSD

Dr. Steffan Datentechnik
Linz - Austria



PC-Crash

A Program for the Simulation of Car Accidents