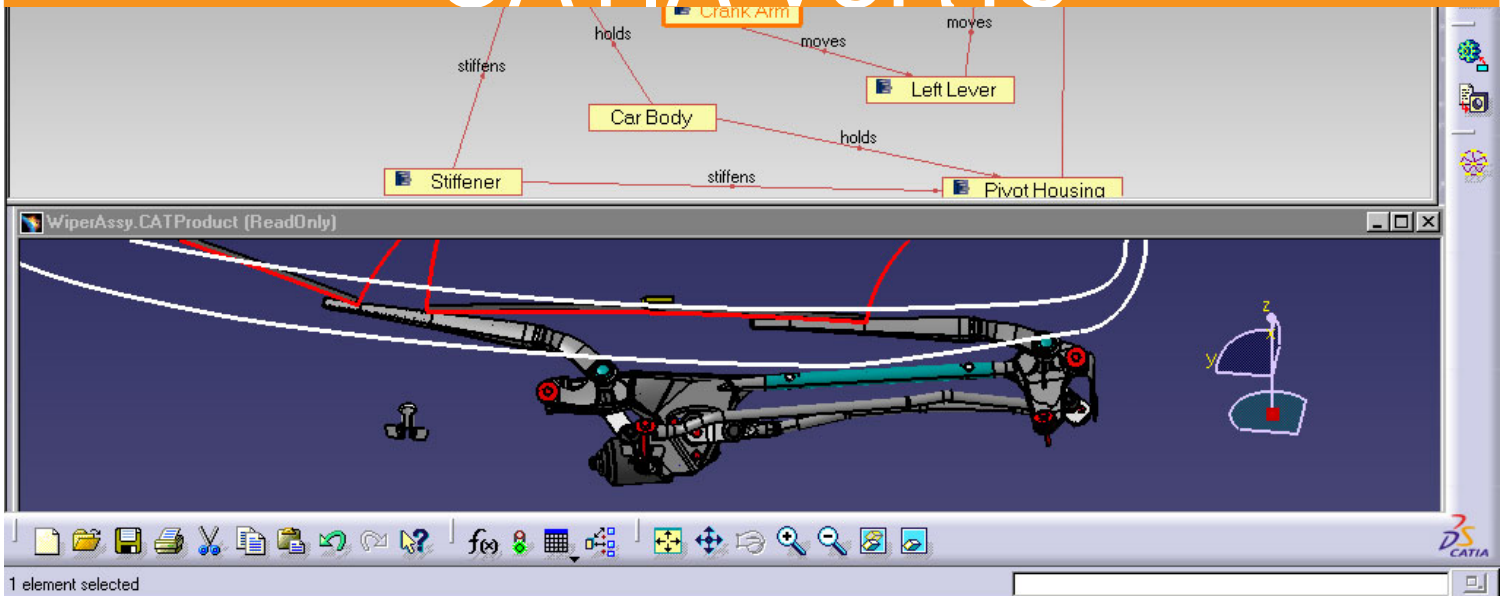


Product Synthesis

# CATIA - Product Function Description 2 (PFD)

## CATIA V5R18





## Product Synthesis

# CATIA - Product Function Description

Describe the functional systems of a product to be designed and visualize them in a schematic-like viewer.

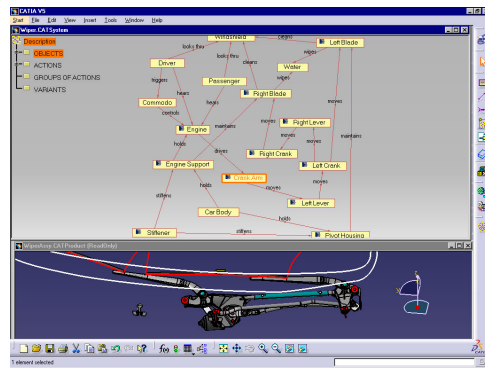
### Product overview

CATIA - Product Function Description 2 (PFD) describes the functional systems of a product to be designed and visualizes them in a schematic-like viewer. This application also manages variants for the functional systems. In addition, it enables users to create links between the functional systems and CATIA product items, thus allowing full functional and physical definition in V5. Finally, scripts can be created from the functional view to generate 3D data.

This product focuses on functional modeling extending the V5 portfolio through the conceptual stages. Seamless integration between classical detailed data (3D) and formal functional specifications offers full product definition capabilities.

### Product Highlights

- ❑ Enables description of the functional systems of a product.
- ❑ Structures the functional definition of a product across several documents.
- ❑ Provides visualization of the functional systems in a schematic-like viewer.
- ❑ Enables management of variants for functional systems.
- ❑ Allows creation of links between functional systems and CATIA product items, enabling full functional and definition in V5.
- ❑ Manages scripts from functional view to generate 3D data.



### Product Key Customers Benefits

#### Description of the functional systems of a product...

The user identifies the functional objects involved in a product (seen as a system) and the interactions between them. The system is presented as a graph, where the objects are displayed as nodes and the interactions as arcs. This results in a graphical presentation of sentences. Thus, the semantic view of the product can be defined prior to subsequent product design stages (preliminary and detailed).

#### Decomposition of the functional definition across several documents...

This approach is similar to Product - Subproduct decomposition (Insert New, Insert Existing, etc.). The parameters of the subsystems, which can be reused on a higher level of the system, can be

published. This functionality is useful in the case of large systems.

#### **Visualization of the functional systems in a schematic-like viewer...**

The schematic-like viewer has the UML (Unified Modeling Language) look. The user can disperse graph elements to produce an enhanced 2D layout and allow easy reading and analysis of the system model.

#### **Management of variants for the functional systems...**

The user can keep the old design as a basis for brainstorming on next-generation systems and as a starting point for alternative studies.

#### **Creation of links between functional systems and CATIA product items...**

Users can define several associations attached to a functional entity. Associations can be made through links to a variety of PPR (Process-Product-Resource) items, including product, part, sketch, wireframe element in a sketch, etc. This enables the user to regroup links to PPR items attached to a functional entity, according to a given design stage (skeleton 2D, rough design, preliminary design, detailed design, etc). Consequently, more flexibility and accuracy are provided to the user, who can fully define a product, both functionally and physically, in CATIA V5.

#### **Management of scripts...**

Users can manage scripts from the functional view to generate 3D data. A functional entity can contain different scripts adapted to different design stages. This allows different design stages to be broken up into different scripts, giving the user more flexibility.

## ABOUT CATIA V5R18

CATIA is Dassault Systemes' PLM solution for digital product definition and simulation.

**[plm.3ds.com/CATIA](http://plm.3ds.com/CATIA)**

