# IX Frequently Asked Questions

**1) What is Simultaneous Product Development (SPD)?**

SPD brings together all participants in product development, including product designers, experts, suppliers, and even customers in a focused community to define, design, modify, evaluate, monitor and produce quality products in parallel.

**2) What is IX Functional Modeling?**

IX Functional Modeling enables users to concentrate on what they want to model, not how to model it. Functional features are a unique set of tools encapsulating the rules of mechanical design as well as industry-specific behaviors. The innate functional knowledge of these features ensures nothing can be modified in a way that impairs their intended behaviors.

As an example, when designing a plastic molded part, we might want to add a rib.  The intended behavior of the rib is to add strength to a shelled volume by being placed on the inside of that volume. The Rib tool in IX Design V5 takes that behavior into consideration.  The user simply needs to select a profile that will act as the mid-plane of the rib and the height and width of the rib.  The rib is automatically created inside the shelled volume.  If another behavior is desired say, the rib needs to exist outside the body; the user can choose to "extend" the rib outside the shelled body.  The user can also add draft and fillets to that rib.

Because there are many different behaviors that can be defined within one functional feature, the total number of features in an IX V5 model is often less than the number of features that are needed to create the same model in a traditional CAD tool.

**3) What is IX Instant Participation?**

IX Instant Participation is a key part of SPD. It is the ability for anybody engaged in product development to work in parallel, on the same part while sharing and merging design behavior changes, at their convenience, no matter where they are or when they are available.

As an example, a manager can create a project using a web page that is on the IX SPeeD Server. He can then invite other designers and engineers to participate.  They can be located all over the world; the team doesn't have to be online at the same time.  When the product model is being worked on by a team member, he or she can share entities like sketches, solids, features (cutouts, ribs, points, etc.), dimensions and even notes.  The other participants can merge these entities into their view of the product model.

**4) What are "order independent" features?**

Order independence means that the user can create functional features without worrying about the order in which they are built. Take the example of a "shoebox" shaped part with ribs inside.  The part has basically three features; a solid box, a shell or wall thickness with the top face removed, and the ribs.  Traditionally, the part would have to be created in a specific order: first the solid box, then the wall thickness, and then the ribs.  With IX Design V5, the order is irrelevant. The wall thickness is considered a property of the solid and the end result will be the same.

**5) Does IX Design V5 use some kind of translator to read native CATIA V5 files?**

No, there is no translation of file format. IX Design V5 is very unique in the fact that it can read and edit native CATIA V5 files (and vice versa). IX Design V5 is built on the CATIA V5 kernel called CAAV5. It is the only design solution that is completely and natively interoperable with CATIA V5.

**6) If CATIA V5 is order dependent, how can it read and edit IX Design V5 functional features that are order *in*dependent?**

Dassault Systemes and ImpactXoft have formed a partnership whereby ImpactXoft has supplied the IX Functional Modeling capability for Dassault to build into CATIA V5. The integration is apparent in the form of a workbench within the CATIA V5 solution called "Functional Molded Part."

**7) Can IX Design V5 import models from other CAD programs?**

Regarding interoperability, IX Design V5 can import and export formats such as IGES, DWG and DXF. The STEP and STL Interfaces are available as add-on modules to the IX SPeeD V5 Suite.

**8) Is it possible to customize the IX SPeeD V5 Suite and integrate other applications?**

No, there are not currently any object-oriented developer tools (APIs).

**9) What other add-on modules are in the IX SPeeD V5 Suite?**

The complete list of add-on modules is as follows:

IX Sheetmetal Design
IX Generative Part Structural Analysis
IX NC Manufacturing Review
IX Prismatic Machining
IX Real Time Rendering
IX Interactive Drafting
IX Healing Assistant
IX STL Rapid Prototyping
IX STEP Core Interface

**10) Do I need a lot of bandwidth on my network to share and merge entities?**

Minimal bandwidth is needed. You can work successfully at 9.6 kbps. Sharing and merging design data and updates is as simple as sending and receiving e-mail or using an instant messenger because they are sent in small, intelligent bundles called IX functional packets.

**11) Is there any security when sharing and merging?**

There are options to set data encryption levels of 0-128 bit for the secure exchange of data.

**12) Is the IX SPeeD Suite V5 a PDM system?**

No, IX SPeeD Suite V5 is not a PDM system. IX SPeeD Suite V5 complements all other Data Management tools on the market today. Models created in the IX SPeeD Suite V5 can be saved locally and manually checked into any other PDM system. One of the values of IX SPeeD Suite V5 is its ability to manage and accelerate the work-in-progress (WIP), which is the time between when a model is checked out of a PDM system and the time it's checked back in. The WIP phase is not well suited to PDM tools.

**13) If everyone in a project is sharing and merging, who has control over the final released design?**

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Very similar to design practices today, the IX SPeeD Server provides the design team the ability to create and manage projects. In these projects, team members are assigned roles and privileges. For instance, someone in Procurement can only have viewing and sharing privileges, while a Design Lead can have full access to all privileges. With that in mind, a project manager would be the person who manages the data. He would decide which design iteration would be the final released version.

The tool that helps the project manager organize work that has been completed and incorporate it into the final design is called a Project TO DO. A Project TO DO is simply a way to organize work assignments. They help the project manager break down the design into specific tasks that are assigned to the different team members.

**14) How can I find out if a team member merges the data that I share with him? Is there a way for me to be notified if he makes further changes to that data and doesn't consult me?**

The SPeeD Tracker is a tool on the server that records all shares and reports on the status of the shared entities. It's a way to track the history, (modified, replaced or deleted) of that original share and any other entities associated with it. A Subscribe tool creates a personal subscription to design entities and variables so that a project member can automatically receive and incorporate IX functional packets when changes to those entities take place.

**15) How do I let a team member know that I've deleted an entity on my design?**

Just as you can share the creation of entities, you can also share deleted entities. For example, if you have a grill in your design and you decide to delete it, that deleted grill packet will be placed into a trash folder. This "deleted" packet can then be shared with others in the project.