



System Relation Management and Status Tracking for CERN accelerator Systems



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Introduction

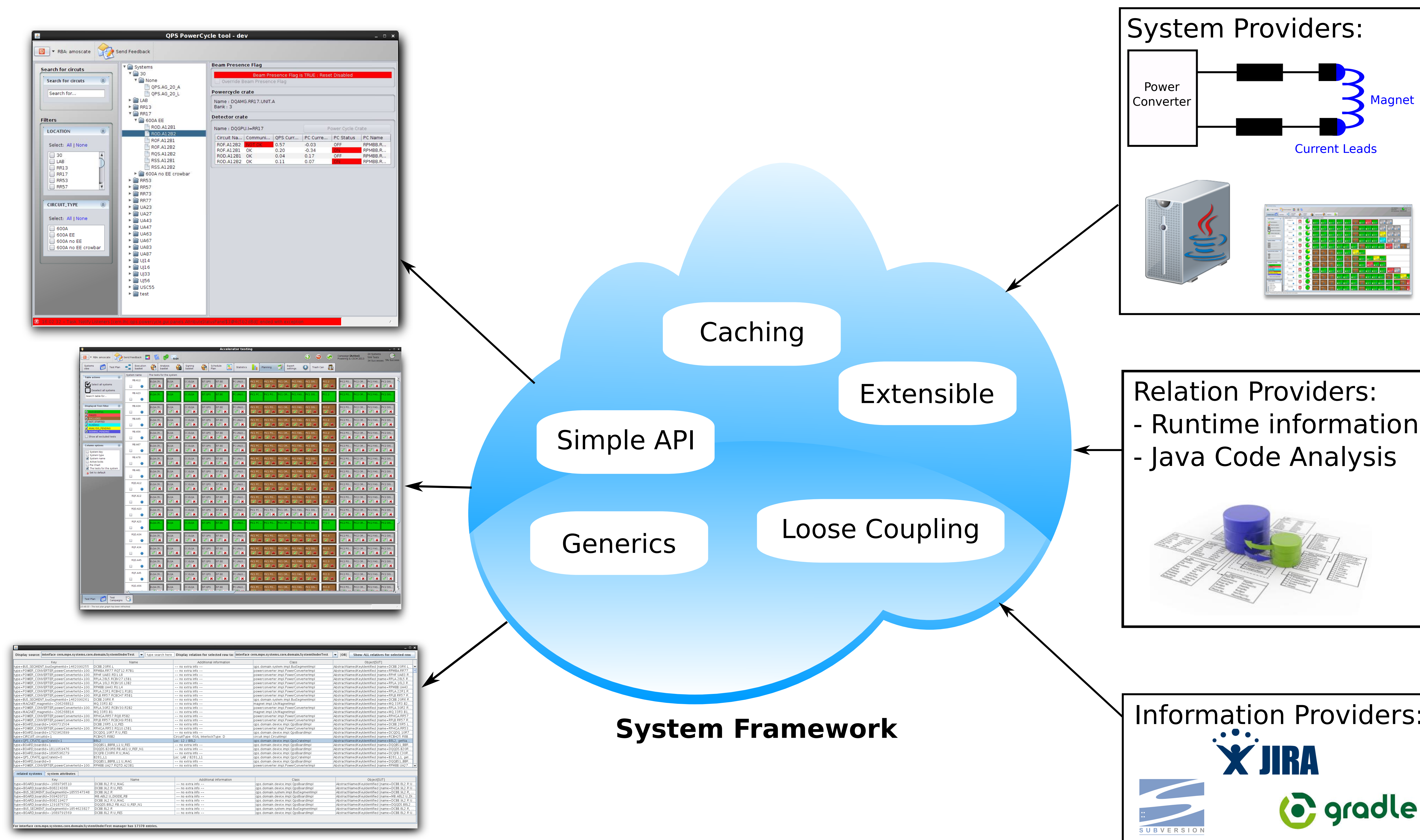
Retrieving systems and their relations is a very general use case within any organization. The systems framework was therefore designed to be generic and extensible.

The main requirements for the system framework are:

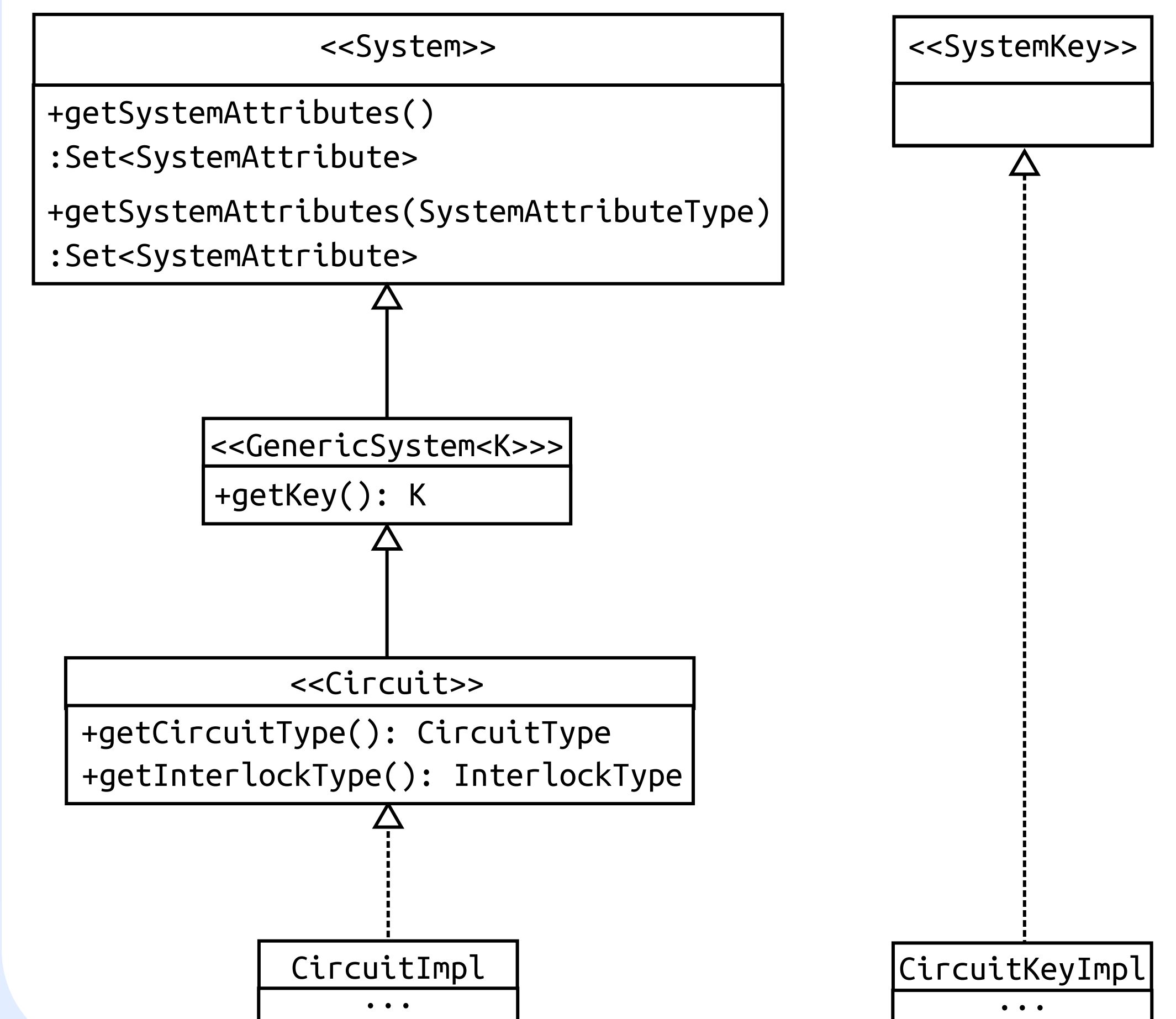
- To create a common system to provide a single API for clients to look for systems, relations and their information.
- To offer a plugin mechanism for developers to add more content, new systems, new relations and new information.

The system framework currently stores more than 17000 systems and 28000 relations.

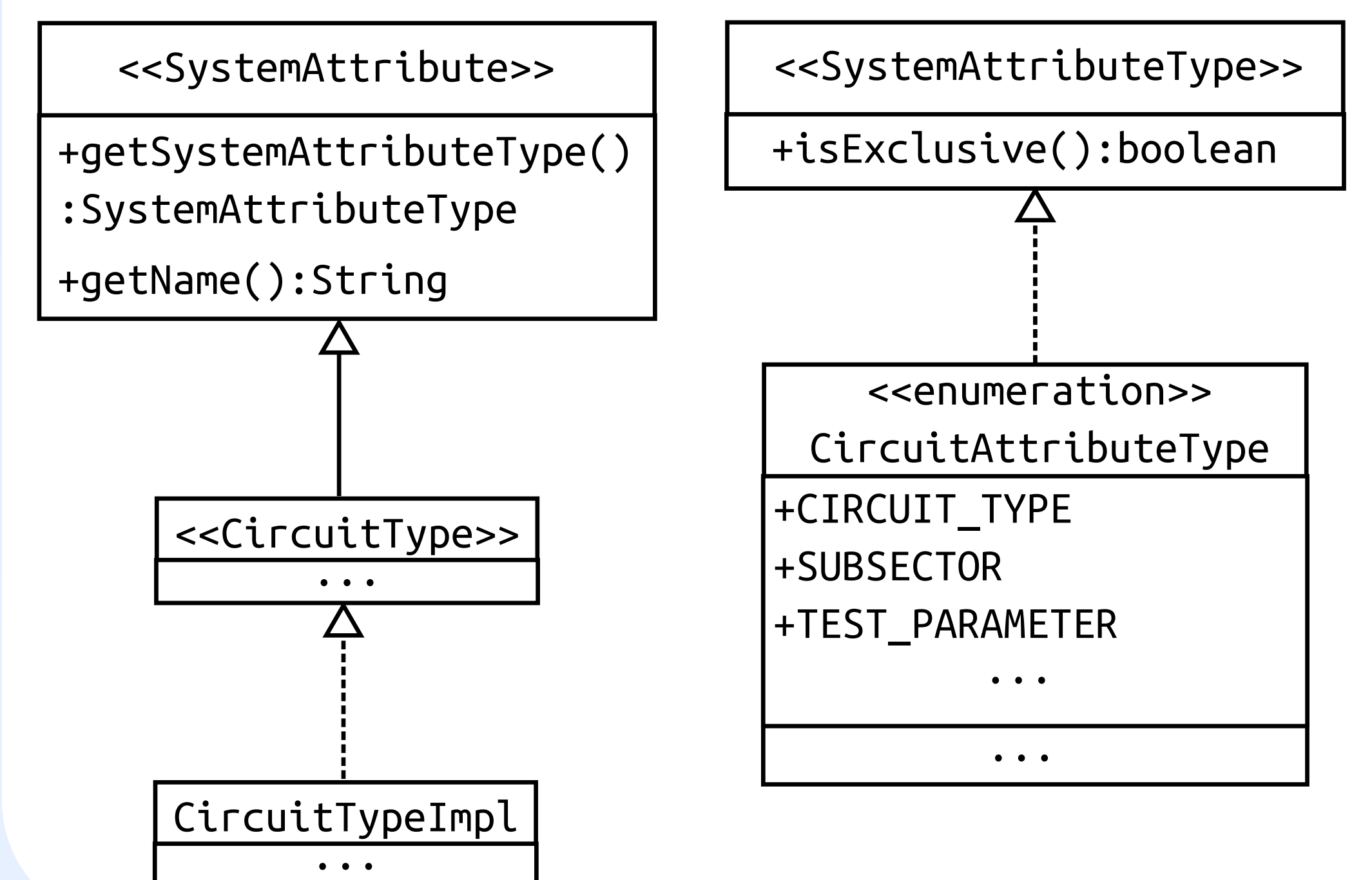
Overview



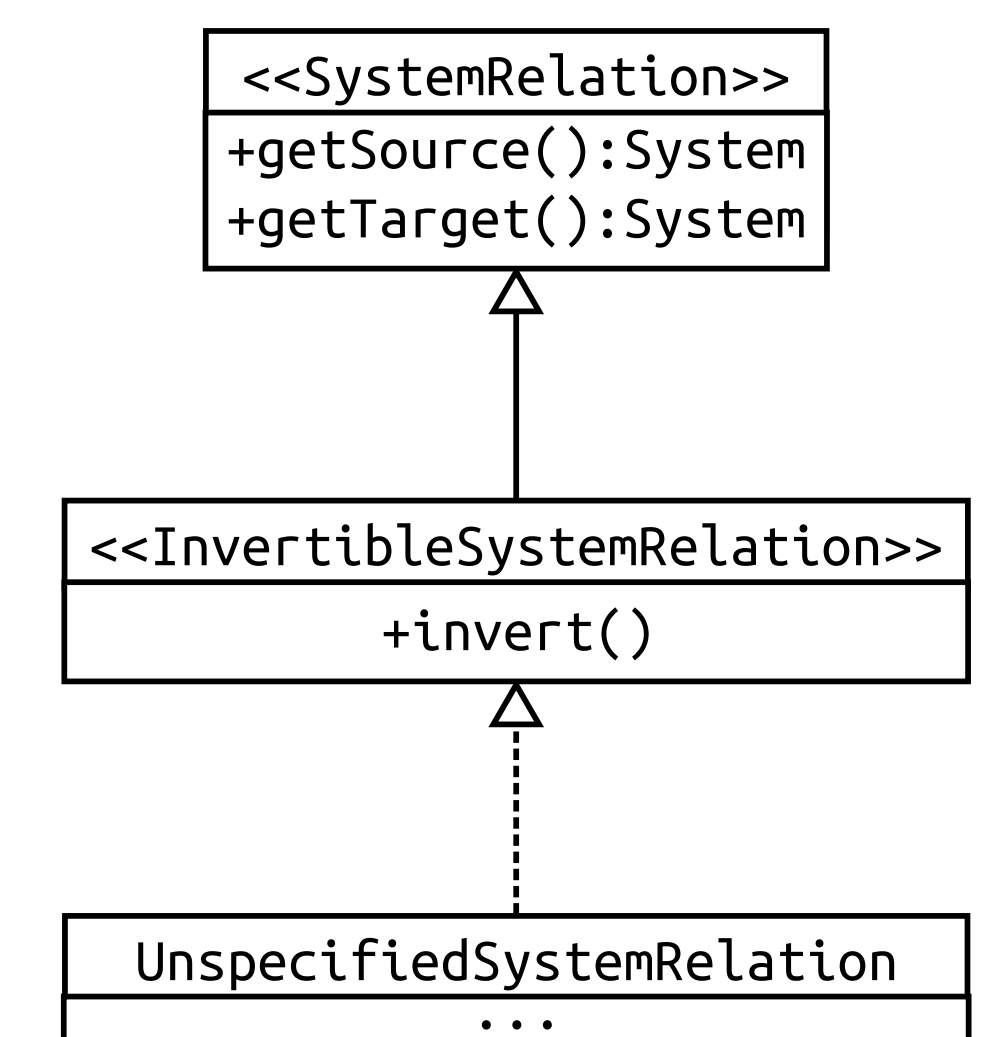
Systems



Attributes



Relations



Providers are plugins that any developer can implement to provide their own systems, relations or attributes. These domain objects simply extend the interfaces described in the UML class diagrams to the right. The framework caches all the data. It is unaware of the implementations and only manages systems. A slim Application Programming Interface is provided by the controllers. It is generic so that clients specify which implementation they want to retrieve.