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The architecture of the e-Infrastructure HELIO

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HELIO is an e-Infrastructure that provides new ways of integrating information from the different communities that constitute heliophysics. HELIO categorizes resources into four classes, allowing (1) to discover heliophysics events and features using catalog services; (2) to find out which instruments observed phenomena using instrument location services; (3) to find out where the associated data resides using data access services, and finally (4) to do something with these data using processing services. A registry service keeps track of all resources managed by the infrastructure. HELIO services are provided as stand-alone tools so they can be used individually, but constructing complex queries requires combining services into workflows. For this, HELIO uses a workflow orchestration tool called Taverna. In this 2nd year of development, a significant attention is devoted to the new graphical user interface, based on jquery technology, providing an unprecedented flexibility. Furthermore, an IDL application programming interface is also in preparation. Furthermore, to make possible the combination of resources from different heliophysics communities, HELIO uses a semantic-driven approach, where relationships between the domains involved are described in an ontology, therefore avoiding to impose a specific unique name space.