



## Brokering Interest Group Case Statement

V0.01	First version.

### Interest Group Charter:

The purpose of the Brokering Interest Group is to provide a truly cross-disciplinary, global forum for data providers, cyberinfrastructure developers, and data users to discuss short and long term steps that could be taken to make data more available and interoperable through the services of brokering frameworks (see definition below). The intention is that as the community will define well-scoped, concrete steps forward, and that working groups will be spun off to implement them.

Brokers, in general, have existed for many years and have found application in diverse domains and industries, such as financial systems, business-to-business interfaces, business-to-consumer systems, medicine, and the automotive industry, to name a few. However, the emergence of brokers in science is relatively new. Brokering is now being piloted with great promise in cyberinfrastructure and science communities in the U.S., Europe, and elsewhere.

It is unrealistic to expect that all implementations use the same specification to interoperate. Brokers provide the bridge between communities using different specifications. Having diverse communities is a strength, each with their own standard. So while there is a drive to adopt common specifications, e.g., standards, this singularly will never be achieved. Brokers and standards are the yin and yang of interoperability.

Building an “e-Infrastructure,” or cyberinfrastructure to support science in the 21st century will be a long, complex, dynamic process with many tensions and uncertainties. We cannot predict which solutions will be sustained, or what path will be followed, but it is certain that its successful evolution will require mediators and middleware, i.e. brokers, to connect existing infrastructure elements and facilitate cross-domain communications. Having a global forum where the broadest possible community can discuss issues and come to agreement on proposed steps forward should be of great value.

### Brokering Framework Definition:

Brokers aim to intermediate systems and federation capacities that implement well defined interfaces. Effective brokering functionalities are possible because present (and future) research infrastructures applies disciplinary interoperability standards. Brokers provide the bridge between communities using different specifications.

Brokers are middleware interconnecting client and server components in a cyberinfrastructure;

Brokers are services facilitating the run-time interconnection (sharing of resources) among potentially a multitude of users and providers in a way that requires little effort on the part of either;

A brokering framework can consist of multiple brokering components to support capabilities such as discovery, semantic and natural language mediation, data access services, workflow processes, and publishing;

A multidisciplinary brokering framework is an independent third-party service and does not belong to any disciplinary infrastructure.

### **Initial Leadership:**

The Interest Group will be lead initially by *Stefano Nativi*. His contact information is:

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