

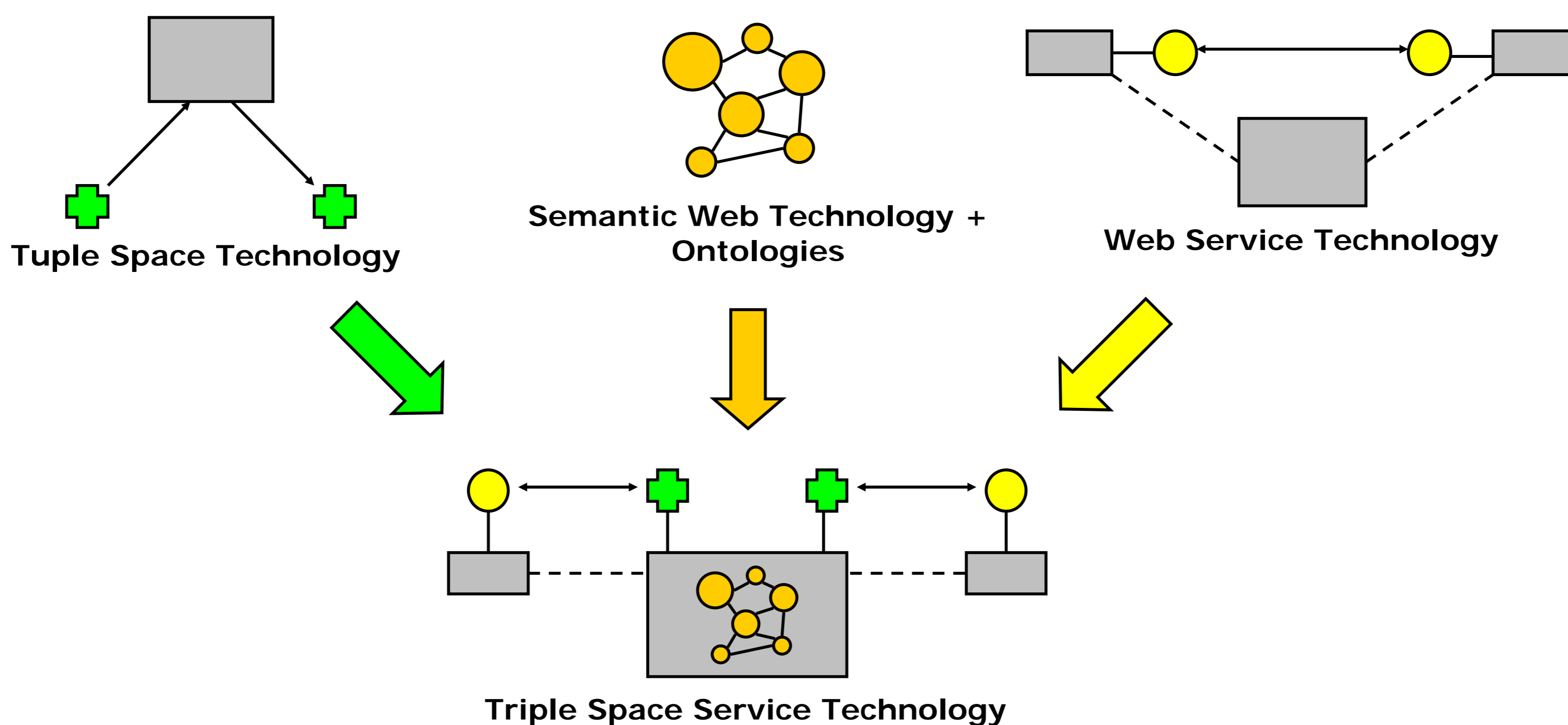
Mission

The goal of the TripCom project is moving the World Wide Web from a collection of human readable information connecting humans into the direction of a network that connects applications based on machine-processable semantics of data. Facing shortcomings of current Web service technology, TripCom proposes a new communication paradigm for fully Web-enabled Semantic Web services which is called Triple Space Communication – TripCom. The project aims at the convergence of three basic technologies: **Tuple Space Computing**, **Semantic Web**, and **Web Services**.

Tuple Space technology — originating from the field of parallel computing — provides the infrastructure for the realization of asynchronous communication using a virtual shared memory. Multiple partners can reliably exchange data by means of persistently publish and read. By decoupling communication partners in time, reference and space, Tuple Space-based communication reduces the need for a priori communications knowledge.

Semantic Web technology provides benefits in managing and matching of communications through semantic annotations. By creating ontologies they provide consensual terminologies and facilitate interoperability. Matchmaking of semantically linked data can reduce the need for direct mapping of communication requirements.

Web Service technology provides a “virtual component model” to unify the heterogeneous world of components. It allows to leverage existing functionality without the burden of handling middleware specific idiosyncrasies, like the invocation mechanism, transport protocol etc. Web Services are a well-understood communication structure and architecture for enterprise applications. Ultimately, Web Services are another big step towards solving the EAI problem.



Triple Spaces improve the ideas of Tuple Space computing by adding semantics and means to structure and relate tuples in a scalable Triple Space Architecture. They improve Web Service technologies by adopting the flexible and powerful asynchronous communication model of Tuple Spaces. Together with Semantic Web Technology, Triple Spaces provide a highly scalable and semantically enhanced communication infrastructure for application integration based on persistent publication.

TripCom is a Strategic Research Project (STREP) funded by the European Commission under FP6. The project has a budget of 3.650.000 € and started in April 2006 with a duration of 36 months. Its work is closely aligned with the projects from the European Semantic Systems Initiative (ESSI) cluster, whose mission is to collectively promote ESSI research results to both industry and academia. Project partners are: Leopold Franzens University Innsbruck, National University of Ireland, Galway, University of Stuttgart, Vienna University of Technology, Free University of Berlin, Ontotext Lab, Sirma Group Corp., Profium OY, CEFRIEL SCRL., Telefonica I+D.