## A Case for the World Wide Grid: Interlinking Islands of Grids to Create an Evolvable Global Cyber Infrastructure

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## Abstract

Over the last few years, several organizations have set up their own Grids to share resources such as computational, data and instruments. To build such Grids they have used several toolkits and middleware, which have being standardized and integrated with diverging technologies. This has resulted in islands of isolated grids with no true resource sharing and exchange among them. Nowadays, there is a profound interest on (a) federating Grid islands allowing users from different Grids to share resources; (b) the establishment of Virtual Organizations comprising individuals and resources from different Grids; (c) making the Grid more pervasive; and (d) applying Grid technologies to the commercial world as a means to manage IT infrastructure. We believe that these needs will take us to the next step in the evolution of the Grid, which we call the World Wide Grid (WWG). However, in order to make it reality, studies have to be carried out in some key areas. As example to what happened to well-known technologies such as the telephone system, several technological, economical, social and cultural aspects can speed up or slow down the development of such infrastructure. Therefore, this paper presents a case for the World Wide Grid and presents some areas that deserve special attention.