Chapter XVI

Towards Building E-Government on the Grid

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ABSTRACT

This chapter introduces the goal of ShanghaiGrid and its sub-project e-government on the grid. It first presents the main achievements of the e-government in Shanghai, points out that one of problems of the e-government is how to integrate each government agency’s resources to form cross-agency services for citizens, and argues why grid technique is an ideal way to solve that problem: grid can enable municipal government to integrate its information resources dispersed in different organizations in secure way with open standards and strengthen collaboration and information sharing. Then it gives a conceptual framework of e-government on the grid. Based on the GT3 core services, some core middlewares are developed to support the e-government infrastructure (i.e., workflow, transaction). OGSA-DAI is used to integrate data from different government agencies. The real-name citizen mailbox along with the MyProxy is the basic authentication method used in e-government.
BACKGROUND

Shanghai is a municipality of eastern China at the mouth of the Yangtze River. Today, it has become the largest economic center and important port city in China, with a land area covering 6,340 square kilometers and a population of 16 million people. Household PC penetration rate reached 70% and the Internet subscriber rate reached 47% in 2004. It is the entrepreneur city of the 2010 Shanghai World Expo. The municipal government is working toward building Shanghai into a modern metropolis and into a world economic, financial, trading, and shipping center by 2020. It has always been paying attention to the development and establishment of information industry and society. ShanghaiGrid is a long-term project sponsored by the Science and Technology Commission of Shanghai Municipality. It aims to construct a metropolitan-area Information Services Grid (ISG) and establish an open standard for widespread upper-layer applications from both communities and the government.

With the development of Information Technique, the e-government in Shanghai is rapidly developing and steps into the period of interactive government administration. The main achievements in official publication are listed below (Shanghai, 2005):

- The e-government network platform has been basically established. The public affairs network mainly transmits confidential information and connects 300 government agencies. The external network, mainly operating governmental general management and services, has been currently connected to 19 districts and counties and 72 municipal government agencies. Shanghai Public Affairs Network has been established and put into operation.
- The government’s portal Web site of Shanghai-China (http://www.shanghai.gov.cn) as shown in Figure 1 offers 2379 forms in 707 service items, which can be downloaded via the portal. The daily portal visits reached 180,000 times in 2003 and 340,000 times in 2004. Users can personalize their portal and subscribe the information they want.
- Four major databases (population, legal identity, geographical information, and macro-economics) have taken shape and been put into use.

Although Shanghai’s e-government is at the one of the top positions in China, it still has some weakness.

Current e-government infrastructure can not effectively solve the problem of “isolated island of information.” The portal Web site provides more than 700 services, but most of them only provide simple tasks in certain areas; cross-domain and cross-department services are rarely found. For the security and policy issue, the information and data can not be shared directly by each agency of the government, which leads to something that could be done online must be done manually through each department agency. In some situations, citizens may file more than ten different