Abstract. In this paper, we present a new technology intelligence system enhanced with mobility and user-adaptation and guidance to support technology strategy establishment of small and medium-sized companies. The system has major approaches of catching users’ intention, giving intuitive insight to users, supporting mobile environment in the technology intelligence field.

Keywords: Business Intelligence, Technology Intelligence, Mobile BI, User Adaptation, User Guidance, Information Analysis

1 Introduction

As the business and industry grows, the importance of technology strategy also grows bigger. Especially, to establish technology strategy, each organization should perform technology planning through active technology intelligence. Technology intelligence refers to activities for supporting an organization’s decision-making process by collecting and forwarding information on new technologies [1]. To support technology planning, especially, decision-making of executives, we have developed InSciTe Adaptive, which is a technology intelligence service enhanced with mobility and user-adaptation, by discovering knowledge resources and information analysis services with text mining and Semantic Web technologies.

2 Basic Approaches

There are three major concepts for developing InSciTe Adaptive: user-adaptation/guidance, insight, and mobility.

• User-adaptation/guidance: Conventional information systems have fixed service flow and support only static services. Whereas the proposed system provides dynamic service flow with different start point by understanding user’s intention and guides users to the final goal – i.e., report – of the system [2].

• Insight: Current analytics only focuses on scientometrics but the proposed system provides insight to directly give any conclusions from the analysis.
• Mobility: Mobile business intelligence (BI) can bring competitive advantage and the broad adoption of mobile BI appears inevitable [3].

3 Technology Intelligence Services

Technology planning is generally performed in five steps [4]. Among them, the first four steps require information to support decision-making by executives. We examined what information is required in each step and designed eight services to provide such information. The followings are some of the major services.

• Technology trend [5]: This service explores technology growth level and speed, like Gartner’s Hype Cycle. To analyze the time series information from source documents more precisely, a function for time calculation has been improved by considering discontinuous problem of time series information between the last and first month of years and overlapping half of each year with half of the next year.

• Convergence technology: This service aims to recommend any pairs of technologies which could be converged. Convergence technology can be defined as a pair of technologies having more than two elementary technologies in common and creating a synergy effect through converging. For example, automobile industry combined with augmented reality technology can create new values and increase the company’s market share more than ever before. This service analyzes very large amount of data and helps companies finding some novel item for their future growth.

• Agent level: This aims to compare current technology levels among countries or companies. It further analyzes the levels with multi-dimensional views such as academy and business.

• Agent partner: This aims to find and recommend current or potential competitive or collaborative agents that conduct research and development in similar domains. This information is obtained by analyzing semantic relationships among agents from technology literatures, not measuring co-occurrence, expecting more accurate analysis results.

References