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TRENDS OF KOREAN TECHNOLOGY CONVERGENCE RESEARCH: THE NETWORK ANALYSIS FOCUSING ON THE PATENT CO-CLASSIFICATION IN KOREA AND US

Abstract:

The technological convergence, or the technological fusion, has become more important to create new technologies as well as new industries. As increasing of importance, we reviewed the IPC co-classification and citation information of the United States and Korean patents in 2009, 2010 and 2011. Network analysis methods and indexes including as a degree centrality and a betweenness centrality are used to analyze the characteristics of the technological convergence trends.
Various networks were created based upon IPC co-classification and citation information in each country and year. In addition, IPC citation was utilized information between the patents which has different IPCs. Also, in the case of Korean patents, networks were created and analyzed to find the characteristics according to the types of institution such as university, public institution and business entity.
Through the analysis, it was found that the trends and the uniqueness of the convergence researches. Those results shows the differences between two countries, the differences and changes between degree centrality and betweenness centrality, the differences between co-classification and citation. Also, it was found that the change according to each years from 2009 to 2011.

Keywords:

patent, convergence, technology, SNA

JEL Classification: D85, O32, O33