



WORLD TRADE ORGANIZATION  
ORGANISATION MONDIALE DU COMMERCE  
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## "IP & TRADE POLICY TODAY" SEMINAR SERIES

*a series of informal conversations about the interaction between intellectual property and international trade in today's global economy, hosted by IPD, WTO*

**SEMINAR 2, 16 MARCH 2018, from 11:30am**

**PROFESSOR ANDREW TORRANCE**

**Topic:** *A Worldwide Patent Citation Network - Country Comparisons, Technological Trends, and Patent Valuation*

**Speaker:** **Prof. Andrew Torrance, Earl B. Shurtz Research Professor, Kansas University School of Law, USA**

**Date, time and venue:** **16 March 2017, 11.30 to 1.00 p.m., WTO Room S3**

**Abstract:** Around the world, countries offer patents to inventors to encourage the creation of new and useful innovations. It is hoped that the patent incentive might lead to social benefits like better medicines, cleaner water, safer automobiles, and faster computers. An elaborate web of treaties connects national patent systems into a global patent system. Taking advantage of the fact that newer patents make reference to ("cite") older patents, we use a powerful new approach to construct a worldwide patent citation network that encompasses data from all major jurisdictions. Based on the PATSTAT database maintained by the European Patent Office and a novel big data network method of analysis, our resulting map of the global patent system is composed of more than 100 million patent documents linked together by almost 250,000,000 citations. One of the advantages of our "eigenvector" approach is that each and every patent and patent application in the network can be assigned a relative and objective importance score, allowing patents, patent portfolios, firms and institutions, inventors, technologies, and even countries to be directly compared with one another or ranked. Mapping the worldwide patent system allows one to classify all inventions into accurate "natural" technological fields, to view and compare these fields, to determine connections between different technologies, and to discover meaningful patterns of global innovation. This study extends our earlier research on the United States patent citation network, published in the Virginia Journal of Law and Technology (2017) as "All Patents Great and Small: A Big Data Network Approach to Valuation" (available as a free download on SSRN).

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