

Item-Level RFID: Insights from METI's¹ Trial in the Japanese Publishing Industry

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Abstract (291 words)

Over the past decade, several industries have considered *Radio Frequency Identification (RFID)* technology to improve supply chain efficiency. In Japan, the national *Ministry of Economy, Trade, and Industry (METI)* initiated and sponsored a number of industry-wide RFID trials between 2003 and 2006. It selected the *Japanese publishing industry*, one of the largest publishing industries in the world, for an early item-level RFID trial.

In 2003/2004, the Japanese publishing industry — just recovering after a major decline in the 1990s due recession, spreading of Internet and mobile phones, emerging library services, and newly introduced second hand book shops — undertook a METI-funded performance evaluation which pointed at distribution inefficiencies, increasing book returns, and large amounts of paper waste contaminated with RFID tags. Searching for potential improvements, the industry and METI calculated a potential impact of RFID on the Japanese publishing industry to reach €2.5 billion in sales increases and cost reductions. Hence, although RFID regulation was still rudimental and RFID technology under continuous development, the Japanese publishing industry opted for an METI-sponsored RFID implementation trial and prepared for the *first real-life test of supply chain wide item-level RFID implementation*.

This case study examines the 2006 METI RFID trial in the Japanese publishing industry which involves a large consortium consisting of industry associations and players, governmental institutions, and technology vendors. It investigates RFID profitability impacts focussing on the trial context, the trial consortium, and the competencies and resources contributed by the various players. The study indicates the technical feasibility of RFID on item level to enhance order fulfilment and book tracking on the way to customers. It finds RFID technology to be suitable to improve efficiency and effectiveness in the Japanese publishing industry and demonstrates that RFID technology contributes to accelerating numerous supply chain processes.

Keywords: Radio Frequency Identification (RFID), Item Level, Publishing Industry, Supply Chain Management, Japan.

Bio Abstract (150 words)

Claudia Loebbecke holds the Chair of Business Administration and Media Management at the University of Cologne, Germany. 2005-2006 she was elected President of the Association for Information Systems (AIS). Previously, she held the KRAK Chair of Electronic Commerce at the Copenhagen Business School and worked at CISR of MIT's Sloan School, INSEAD, Erasmus University, Hong Kong University of Science and Technology (HKUST), and McKinsey & Co. (Germany).

She is Senior Editor of the Journal of Strategic Information Systems (JSIS), Associate Editor of The Information Society (TIS), and serves on several academic editorial boards. She holds an MSc (1990) and a PhD (1995) in Business Administration from the University of Cologne and an MBA (1991) from Indiana University, Bloomington. She received 'European Foundation for Management Development (EFMD)' awards for case studies in Technology Management (1992 & 1995) and was second in the Society of Information Management (SIM) Case Writing Competition (2004).

1 Japanese Ministry of Economy, Trade, and Industry