University of Stuttgart
Institute of Entrepreneurship and Innovation Science (ENI)

Call for:
M A S T E R T H E S I S

USB versus Firewire standards

Topic Description:
In the early stages of the standards battle between USB and Firewire technology, the standards co-evolved with the expansion of the supporting interorganizational network. The flexibility of the standard attracted new network members and grew the size and diversity of the network. This development has been studied until 2010, but still continues. Hence, this thesis will identify the events relating to the USB and Firewire standards, technologies, and supporting networks during 2010-2026. The event analysis then identifies new mechanisms and processes for standards development. Specifically, the thesis includes updating table 2 in Van Den Ende et al (2012).

Table 2 of Van Den Ende et al (2012). Chronology of events for Firewire and USB

Events relating to standard	Events relating to network	Events relating to standard	Events relating to network
1987: First version finalized	1986: Apple (computer manufacturer) starts development of Firewire		1992: Intel (semiconductors) starts development of USB
1995: Data rate increases to 400 mbps	1995: Consumer electronics industry (e.g. Sony) joins	1994: First version USB finalized 1996: Data rate increases to 1.5 mbps 1998: Data rate increases to 12 mbps	1995: Computer manufacturer, pre-packaged software, and computer networking industry join
2000: Changes incorporated enabling higher efficiency and additional functionality such as streaming 2002: Date rate increases to 3200 mbps. Changes incorporated to enable more reliable data communication over longer distance		2000: Data rate increases to 480 mbps 2006: Functionality added to enable USB peripherals to communicate directly with each other	1999: Consumer electronics (Philips) and telecommunications (Lucent) industry join
2006: Changes incorporated enabling interconnection with Ethernet-based local area networks		2007: Battery charging functionality added 2008: Data rate increases to 5000 mbps	

Goals & Expected Contributions:

1. Update the empirical study of USB and Firewire (i.e. table 2 in Van Den Ende et al., 2012)
2. Update the related literature
3. Draw conclusions from the updated empirical study

Initial Reading:

Van Den Ende, J., Van De Kaa, G., Den Uijl, S., & De Vries, H. J. (2012). The paradox of standard flexibility: The effects of co-evolution between standard and interorganizational network. *Organization Studies*, *33*(5-6), 705-736.

Your Profile:

You can apply for this thesis call if you

- are highly motivated to work in a structured way.
- are interested in the topic.
- are enrolled in either MSc BWL / MSc BWL t.o. / MSc TechMan / MA EPSF program.
- have previously completed at least one course offered at ENI (or plan to do so during your thesis semester).

How to Apply:

Application deadline: **30.10.2026.**

To apply, please prepare a max. 2-page exposé summarizing your proposed approach to the topic and a proposed preliminary overview of contents. Please also indicate if you have already completed a course at ENI and don't forget to add your contact details. You may submit your exposé via our website:
https://www.eni.uni-stuttgart.de/en/teaching/Courses/Bachelor-and-Masterthesis/

If you have questions about this call, please contact petra.nylund@eni.uni-stuttgart.de

We are looking forward to working with you!