Résumé du projet de recherche (Langue 1)

The goal of this doctoral thesis proposal is the elaboration and evaluation of a new paradigm for networked communication called Data-Aware Networking (DAN), building on results from the networking and distributed database communities, and adding new ideas on how to overcome the obstacles that others have faced. Although the DAN paradigm should be expected to have multiple possible uses, throughout the course of the thesis, the candidate will focus on a single use case, namely wide area network measurement and troubleshooting.

Résumé du projet de recherche (Langue 2)
Informations complémentaires (Langue 1)
The candidate will have the chance to collaborate with key researcher in France and beyond, thanks to the network of the advisor teams, as well as the environment of the thesis. {{Advisor}} Timur Friedman is Maître de conférences (assistant professor) at UPMC Sorbonne Universités. Dario Rossi is Professor at Télécom ParisTech. The two of them have a strong track record in the research area of network measurements, as testified to by their publications (available through the Google scholar profiles, see http://scholar.google.com/citations?user=6E9rMcUAAAAJ&hl=en and http://scholar.google.com/citations?user=PP1W6HkAAAAJ&hl=en). They are also well inserted in the international networking community, with coworkers in many EU and US (e.g., UC San Diego, UC Berkeley, Buffalo University, Rutgers University) that the PhD student will have the possibility have the chance to visit during his PhD thesis. In addition to working with Friedman and Rossi, the doctoral student will collaborate with members of their research teams. Notably, research engineers Jordan Augé and Marc-Olivier Buob are at the origin of the DAN concept, and have developed tools based upon an early version of DAN, and will participate in guiding the doctoral student. Professor Serge Fdida, a senior member of the faculty at UPMC, will also be involved in the work. Pr. Fdida has an extensive research expertise in the area of routing, and has helped guide the development of DAN from its beginning. {{Environment}} LINCS (http://www.lincs.fr/) is a research centre cofounded by Inria, Institut MinesTélécom, UPMC, and Alcatel Lucent Bell Labs, that is dedicated to research and innovation in the domains of future information and communication networks, systems, and services. Other industrial partners such as Orange have recently joined the centre. A key concept of the LINCS is a physical colocalisation of researchers from the partner institutions, creating a collaborative work space that facilitates exchange and innovation. This ensures that dissemination of the research work done during the thesis also get exposure to key technical people outside academia, naturally creating opportunities at the end of the doctorate. The LINCS currently host a weekly seminar, organized by Dario Rossi, with over 150 talks so far, with key professors visiting for short to long (over 6 months) periods of time. This further extend the reach to the international community

Informations complémentaires (Langue 2)

We seek very bright and strongly motivated doctoral candidates. Fluent (written and spoken) English is a requirement; French is not required to start, but the candidate who does not know French should be committed to learning it in order to function well in the the French academic environment and for living in France.