Senior Programmer
required for **ATH9k-based TDMA-MAC** development in the **FRACTEL** WiFi Mesh Network project, as part of **Tata Teleservices IITB Centre of Excellence in Telecommunications (TICET)**
IIT-Bombay

**Background**

The objective of the FRACTEL (wiFi-based Rural data ACcess and TELephony) project is to develop an efficient and cost-effective solution for rural broadband access in India. The project web-page has further details: [http://www.cse.iitb.ac.in/silmaril/br/doku.php?id=proj:fractel](http://www.cse.iitb.ac.in/silmaril/br/doku.php?id=proj:fractel)

An important ongoing activity of FRACTEL is the development of a TDMA MAC solution. While we have a protocol design ready, the prototyping and evaluation on an open-source linux driver is ongoing.

**Interacting partner:** TCOE at IIT-Madras is an active interacting partner in this project, and is developing a low-cost hardware platform on which to run the above driver.

**Work description**

The nature of the work at the senior programmer position will be the development and testing of an ath9k-based implementation of the TDMA MAC protocol. Ath9k is an open-source linux driver for 802.11 a/b/g/n platforms.

The senior programmer will have to work closely with Mtech students who are involved with the project, and also interact with partners at IIT Madras to work toward a robust and well-tested software implementation.

**Required qualifications and skill-set**

- Master's degree in CS/IT with at least one year of programming experience, or Btech/BE in CS/IT with at least three years of programming experience
- C/C++ programming expertise
- Familiarity with Linux and scripting (bash, perl/python/ruby) are highly desirable
- Knowledge of WiFi (802.11) protocol basics and wireless concepts is highly desirable
- Experience with linux kernel/driver programming is a significant plus
- Familiarity with tools such as svn/cvs, make, escope/ctags are highly desirable
- Linux or windows socket programming experience is desirable
Duration and salary

The position is for a duration of one year. The starting salary will be Rs. 30K (consolidated p.m.). Higher starting salary of up to Rs. 45K (consolidated p.m.) may be considered depending on relevant experience and qualifications of the candidate, additional to the minimum requirement.

Project employees at IIT-Bombay are eligible for campus accommodation, depending on availability.

How to apply

Please contact Prof. Bhaskaran Raman (email: br@cse.iitb.ac.in) and Prof. Kameswari Chebrolu (email: chebrolu@cse.iitb.ac.in). Send an e-application with the email subject: “FRACTEL senior programmer position at IITB”. This should include:

(a) The candidate's CV with specific details of relevant programming experience
(b) A statement of purpose and interest and why you think this job will match your expertise/interest
(c) Any references
(d) Any other comments or remarks.

Prof. Bhaskaran Raman, CSE, IIT Bombay
Prof. Kameswari Chebrolu, CSE, IIT Bombay
Prof. Abhay Karandikar, EE, IIT Bombay