



FUTEBOL

Federated Union of Telecommunications Research
Facilities for an EU-Brazil Open Laboratory

Conclusions



Tips for experimenters



- Make your limited time on the testbed more effective
 - Automate installation, compilation and execution, analysis of results
 - Request changes/new VMs if installation takes too much time
- Avoid the GUI: CLI is your friend
- Learn how to write RSpecs

Tips for experimenters



- Learn about the testbeds in Fed4Fire (<https://www.fed4fire.eu/testbeds/>) and outside of Fed4Fire
 - Different capabilities
 - Other initiatives:
 - GENI (US)
 - Non federated testbeds, e.g. Grid5000
- You can combine resources from multiple testbeds: <https://youtu.be/U1dfYViVKe0>

Conclusions



- An exciting time to work on wireless experimentation
- Many open testbeds offering **free access** to devices worth hundreds of thousands of dollars on each site
- FUTEBOL's TCD and UFMG testbeds are just one of the available testbeds with USRPs
- Other types of devices are available, e.g. VTT's FUTEBOL testbed:
 - Real 4G base stations
 - Software-based 4G base stations
 - Mobile clients

Challenges



- Not everything is perfect...
 - Testbed access can be slow
 - Devices can be booked
 - Not all the aspects of the device are available: still nice to have some hardware on your university...
- Research challenges
 - I/O limitations: challenges to run high bandwidth protocols
 - Strict synchronization and timing is difficult
 - MIMO/beamforming still not easily available
- Integration with other technologies
 - FUTEBOL: testbeds integrating optical and wireless technologies

Futebol Open Call For Experiments



- Available in August 2017
- Main benefit: selected experiments will have some support from the FUTEBOL team
 - Simple submission process
 - Experimenters retain their privacy and IP rights on their experiments
 - Just cite FUTEBOL in your papers/presentations
- Please send us an e-mail (damacedo@dcc.ufmg.br) if you are interested in this call

Thank You!

Questions? Comments?



<http://homepages.dcc.ufmg.br/~wendley/minicurso-sdr/>

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