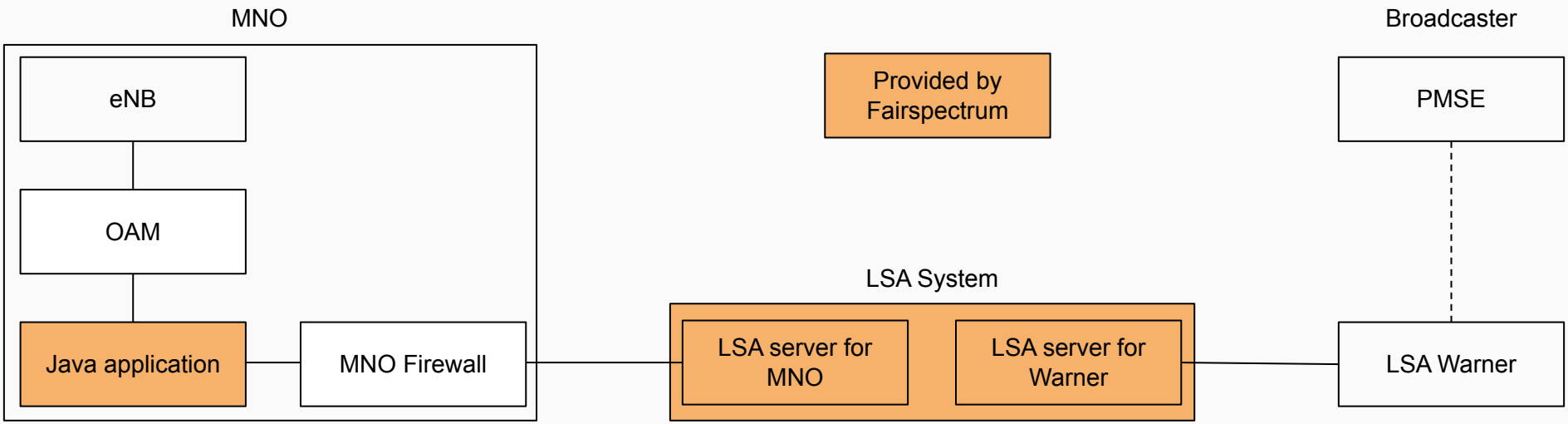
LSA Portugal

Heikki Kokkinen, Fairspectrum

Fairspectrum

LSA pilot system



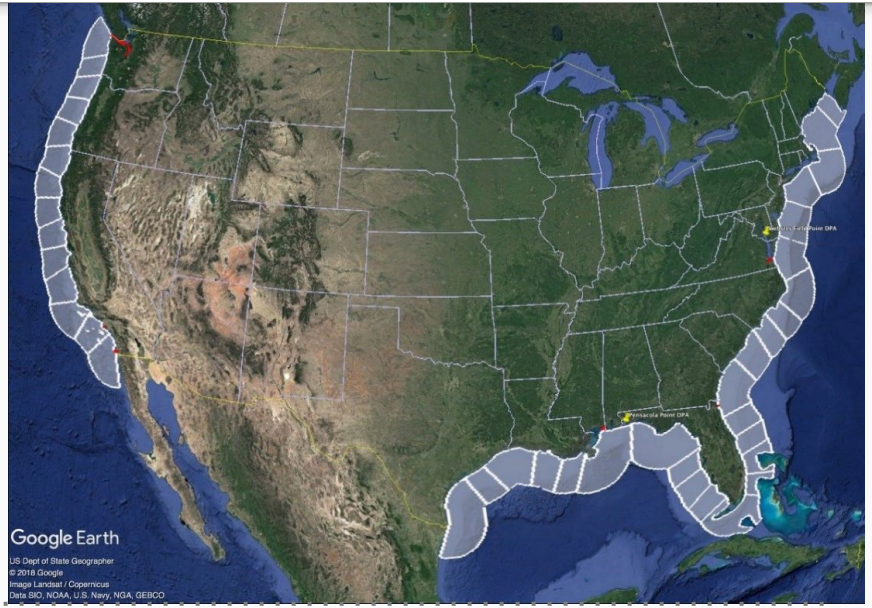
Benefits

Fairspectrum

Background

Most spectrum proposals so far either use:

- Administrative spectrum assignment information available from the national regulatory authority or
- Carry out sensing in vast areas or
- At the location of the secondary user.



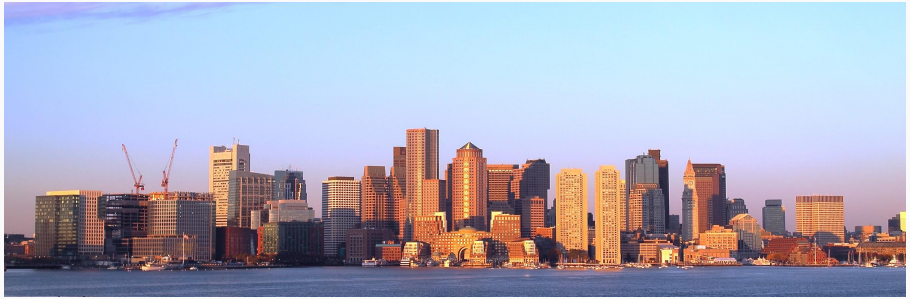
Fairspectrum

Fast response

The administrative information must be maintained and it may not be well suited to fast response spectrum use.

Man-made obstacles

The administrative information based interference protection relies on propagation modeling, and in the current spectrum sharing systems the geographic information does not take into account individual buildings or other large man-made obstacles between the primary and secondary user.



Fairspectrum

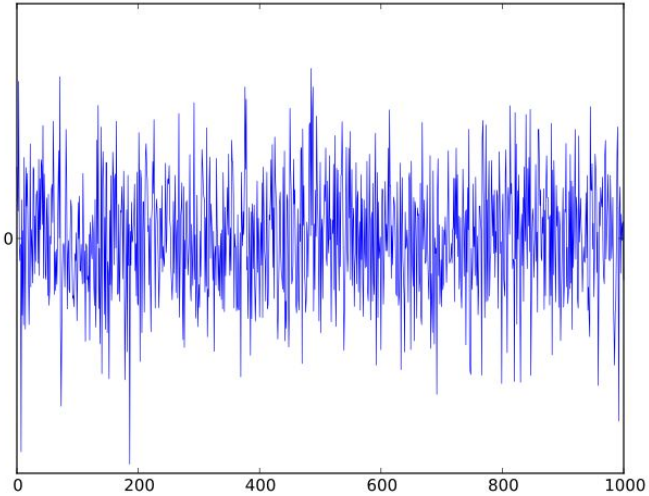
Sensing location

Sensing at another location than in the primary user location introduces error compared to the measurement at the primary user receiver antenna.

Fairspectrum

Low primary power levels

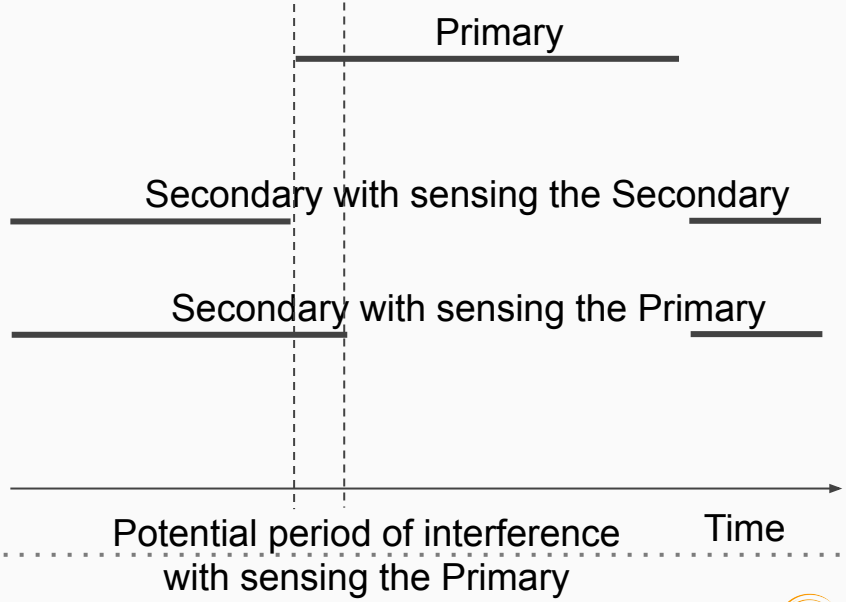
Sensing primary user power levels, which are lower or similar as the secondary user power levels, the secondary use may significantly interfere the sensing of the primary signal.



Fairspectrum

Time perspective

Also from time perspective, it is better to decrease the power levels of the secondary users to non-interfering levels before primary spectrum access begins.



Summary

Sensing secondary user

- Fast response
- Man-made obstacles
- Sensing location
- Low primary power levels
- Time perspective

CBRS

- USA
- Poland
- UK
- Finland

Fairspectrum

Fairspectrum