

# Microsoft SPECTRUM OBSERVATORY

<http://observatory.microsoftspectrum.com>



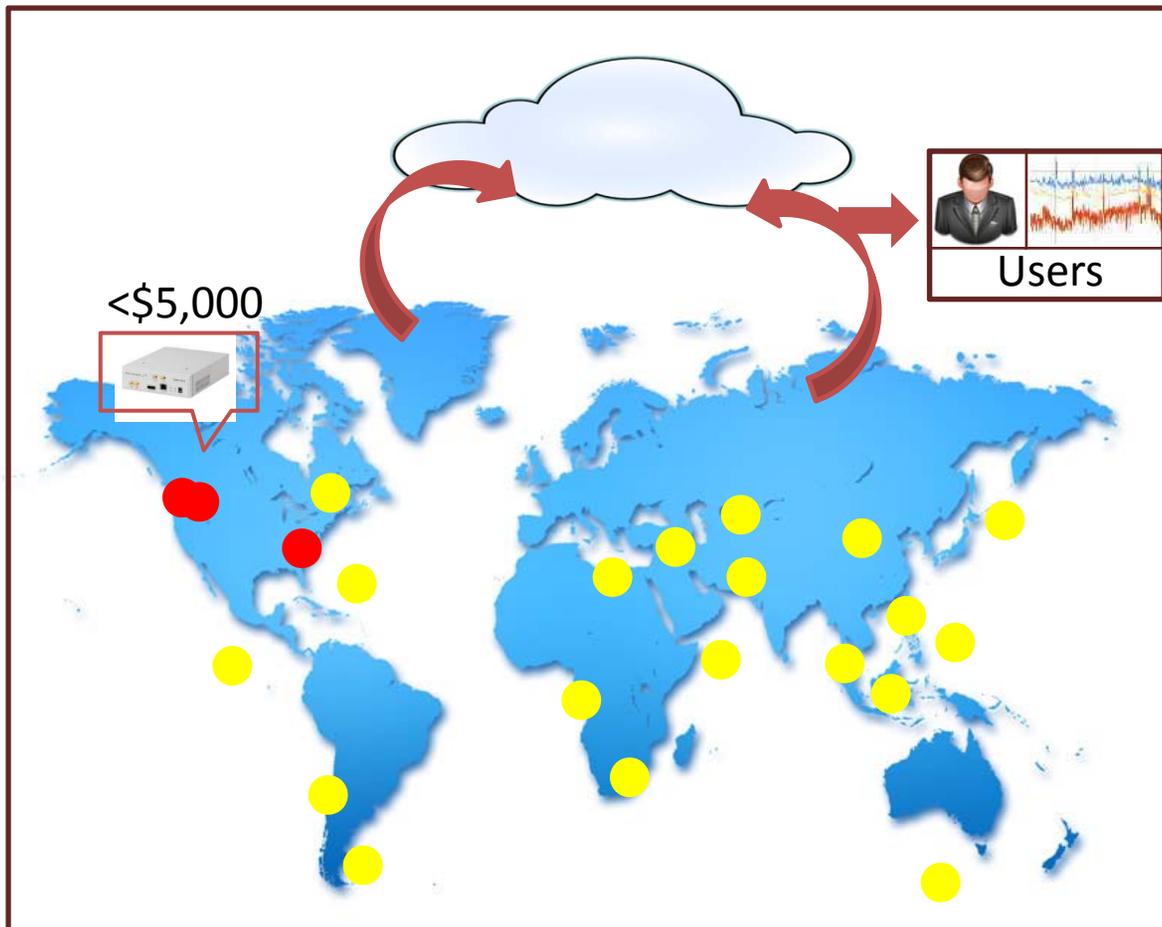
Created to provide an intuitive presentation of the usage of the wireless spectrum. The project is sponsored by Microsoft's Technology Policy Group and the data is made freely available to the public. Data is recorded through monitoring stations and is stored and processed for visualization through the Windows Azure cloud.

March 31, 2014

*Understanding the Spectrum Environment*



# Our Goals

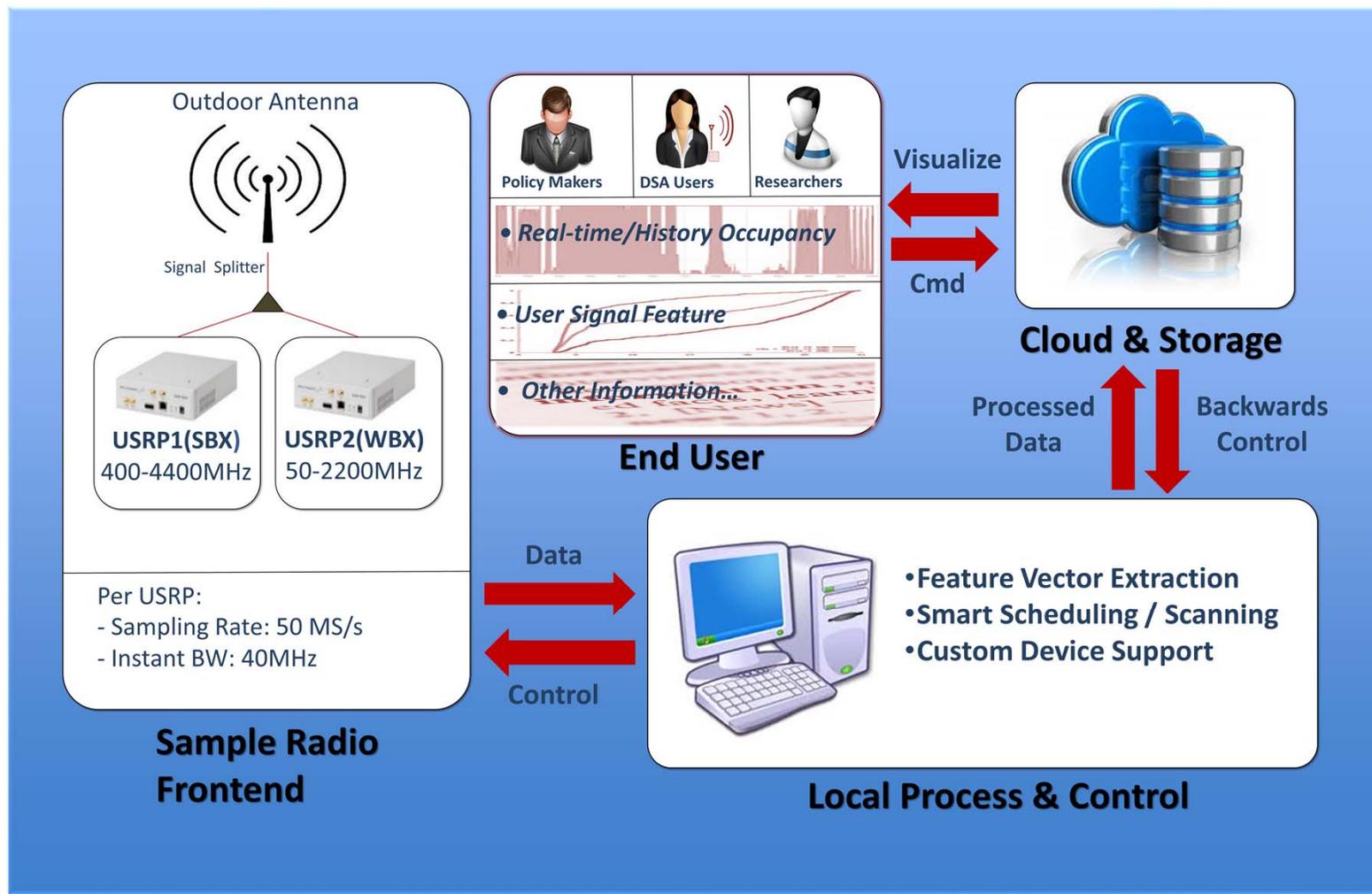


## A global spectrum-monitoring platform:

- Provides evidence (hard data) of the spectrum usage
- Aids in policy and regulation decisions
- Helps DSA systems

- **Large Scale**
  - Distributed to world-wide research orgs
- **Low Cost**
  - Suitable for large deployment

# System Architecture



# Openness and Collaboration

Working with university partners



All code releasing under Apache 2.0 OSS  
license on CodePlex:

<https://spectrumobservatory.codeplex.com/>

# What can this be used for?



## Which frequency band should I use?

- Occupancy information
- List of less occupied bands

## What is the best timing for transmission?

- Existing users' time pattern

## What are the possible interferers?

- A list of existing users
- A signal pattern for each of the existing users

# Real-time Database for DSA

