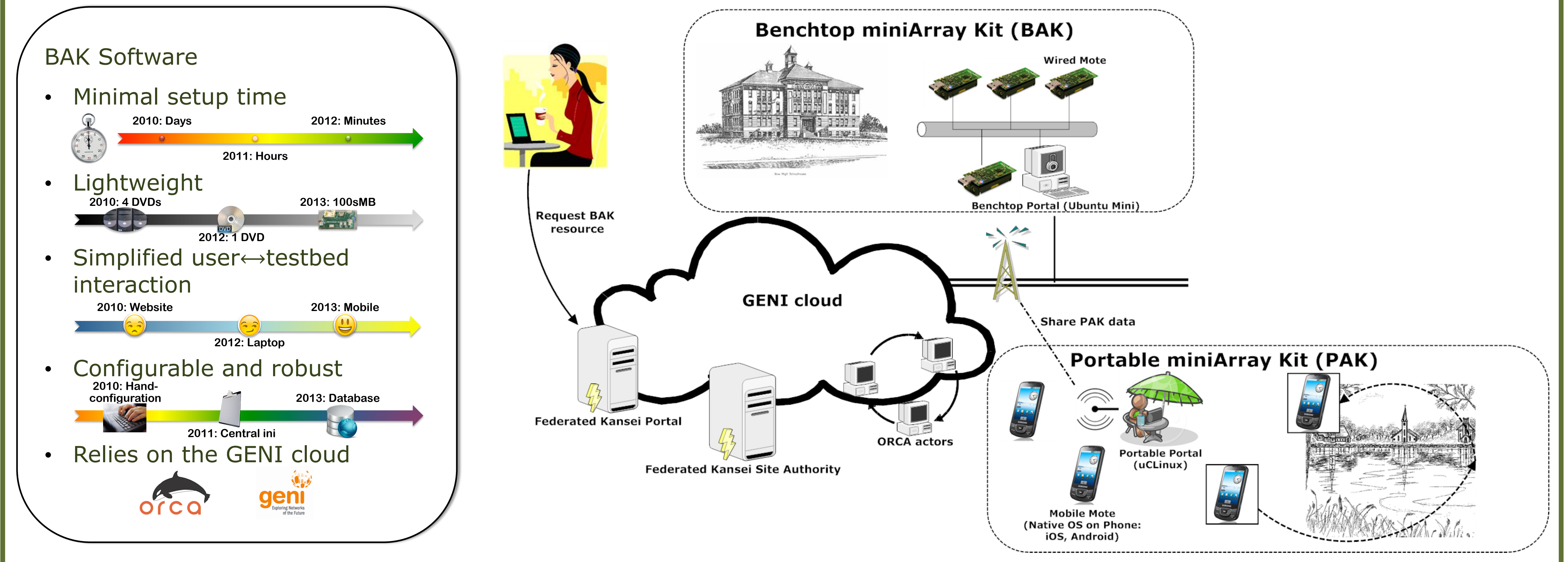


Project Accomplishment: Benchtop miniArray Kit



STEM Concept and Curriculum Development

Science Experiments for STEM Student Users

- Low cost sensor kits
- Multi-purpose compared to specialized science education equipment
- Hands-on learning via experiment activities
- Build intuition with real empirical data
- Lesson plans and experiment software, some bundled with kits and others downloadable from cloud

Experiment Steps

1. Point-Click-Deploy experiment with BAK kit
2. Run experiment to sense sound, movement, temp...
3. Collect and visualize data at local portal
4. Push data into cloud

Outreach

- Engaged undergraduate students to prototype PAK Android application
- Working with STEM educators to develop curriculum corresponding to national standards
- Initial training sessions and demos in India and America
- Teachers provide positive feedback for using WSN experiments to teach abstract concepts, critical thinking

Sample Lessons

- "Speed of sound"
- "Pendulum properties"
- "Light at the end of a tunnel"
- "Temperature maps"

STEM Experiments leveraging Sensor Kits and GENI

