Wireless Network Protocols for Environmental Sensor Networks (ESNs)

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Why Environmental Sensor Networks (ESN's)?

Networks of wirelessly connected environmental sensor nodes enable real-time distribution of mesoscale data.

- Environmental monitoring is well within the capabilities of today's low-complexity, inexpensive nodes.
- Addresses large problem:- The scarcity of existing data due to the high recurring costs of conventional data communications.

GOAL:- "Research and evaluate ad-hoc networking technologies and sensor hardware, develop software to enable an impromptu network solution for gathering and disseminating mesoscale weather data"

- Create an ESN as part of a Mesoscale data network
- Florida Road Weather Information System as an ESN "Backbone"

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This NWS project is one of many uses of Sensor Networks

Currently these are 'lost' treasures of information

- Only available / known to those involved in specific projects
- Data needs to be shared across domains aggregate related info.
- Lessons learned can be re-applied to new situations

➤ The Internet has been highly successful in provided access to distributed data

-Could this be extended to provide access via 'portals' to sensor networks JdownesWSN2005.ppt 10







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