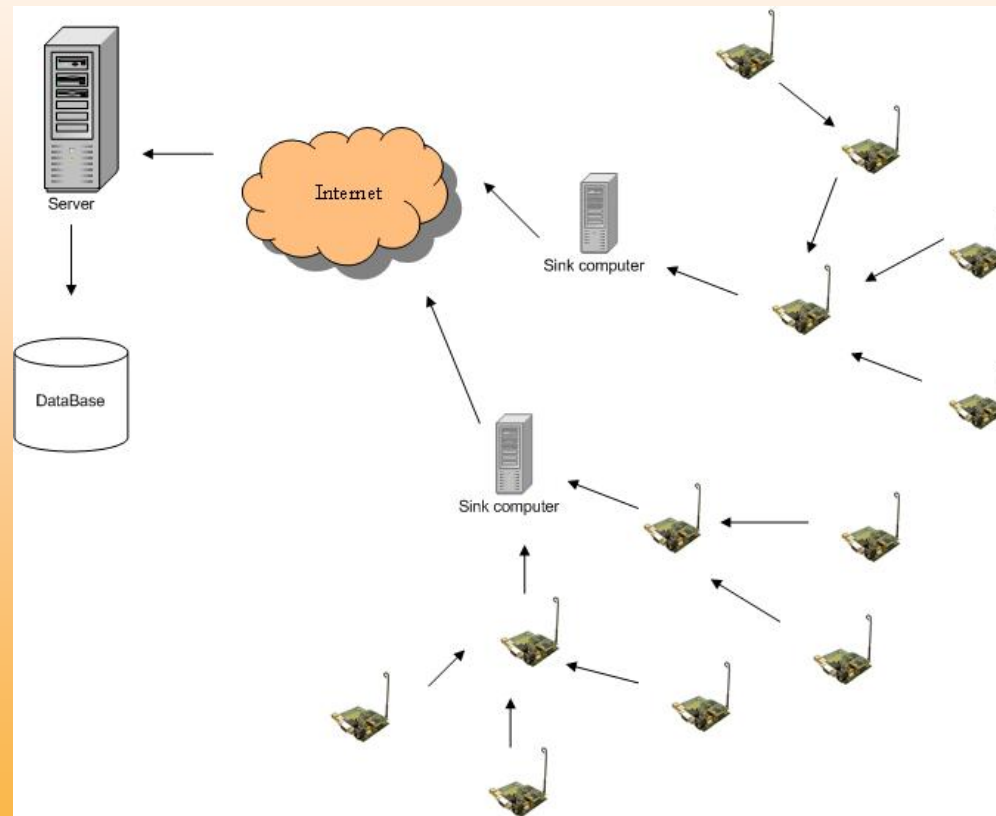


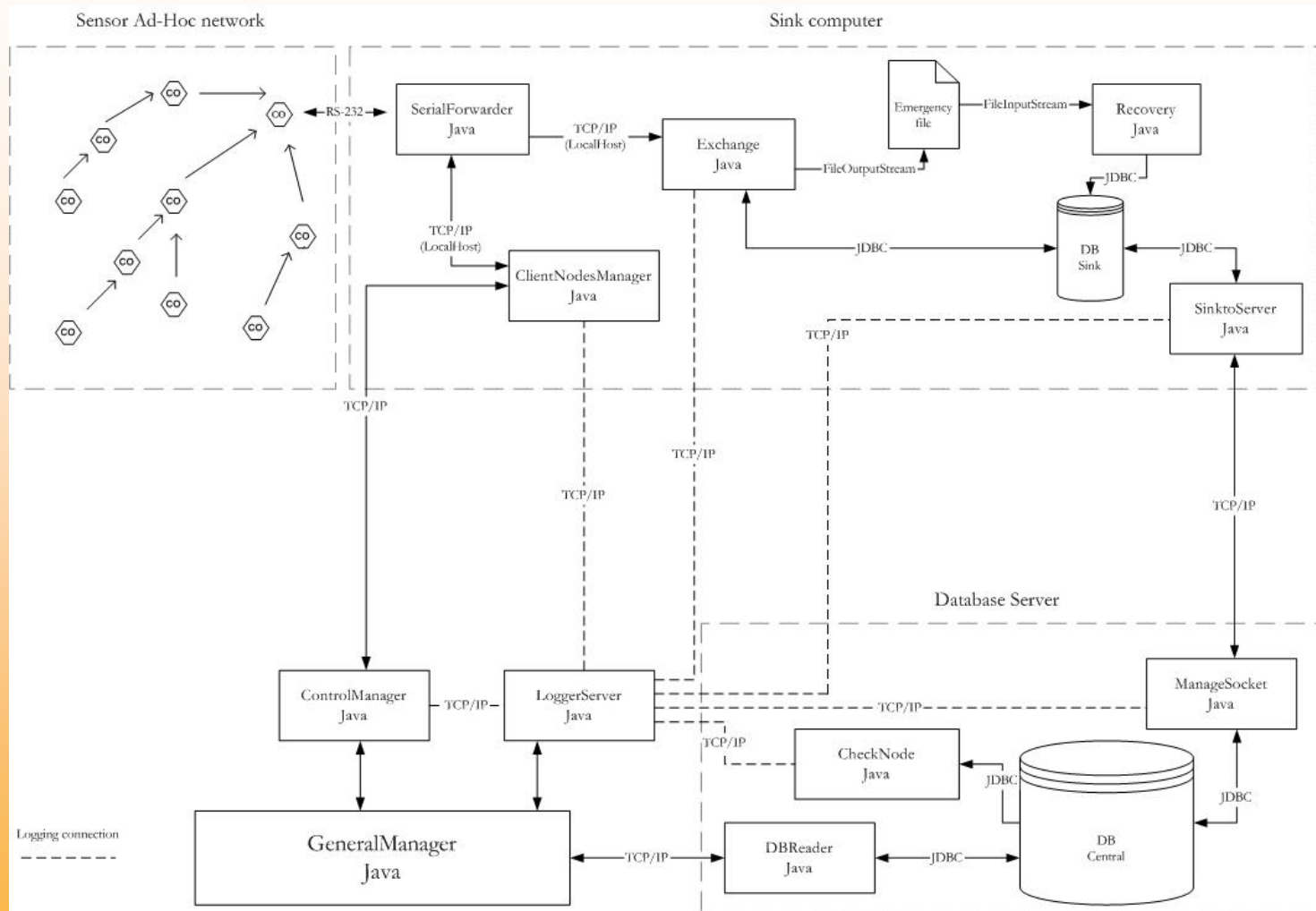
Architecture of a scalable wireless sensor network for pollution monitoring

Project Characteristics

- Testing Sensor manufactured by MichroChemical
- Multi-Sink protocol
- Tinynode manufactured by Shockfish
- Embedded Computer for every Sink
- Multiple way of communication between the Sink and the Database

Architecture





Sink computer

- Functionality:
 - Java virtual machine
 - TCP/IP
 - MySQL Database
- Work as a Buffer between the centralised database and the Wireless Sensor Network

Sink computer

- 4xRS232
- 4xUSB
- 2xPCMCIA
- 1xPCI
- 1xLAN 10/100
- 1xParallel port



Communications

- GPRS
- ADSL
- Ethernet
- (Satellite)



Sensors

- NO₂ and Ozone sensors



Conclusion

- Multi-Sink routing algorithm
- Integration of the sensor on the tinynode
- Energy issues