

Videk: A Mash-up for Environmental Intelligence

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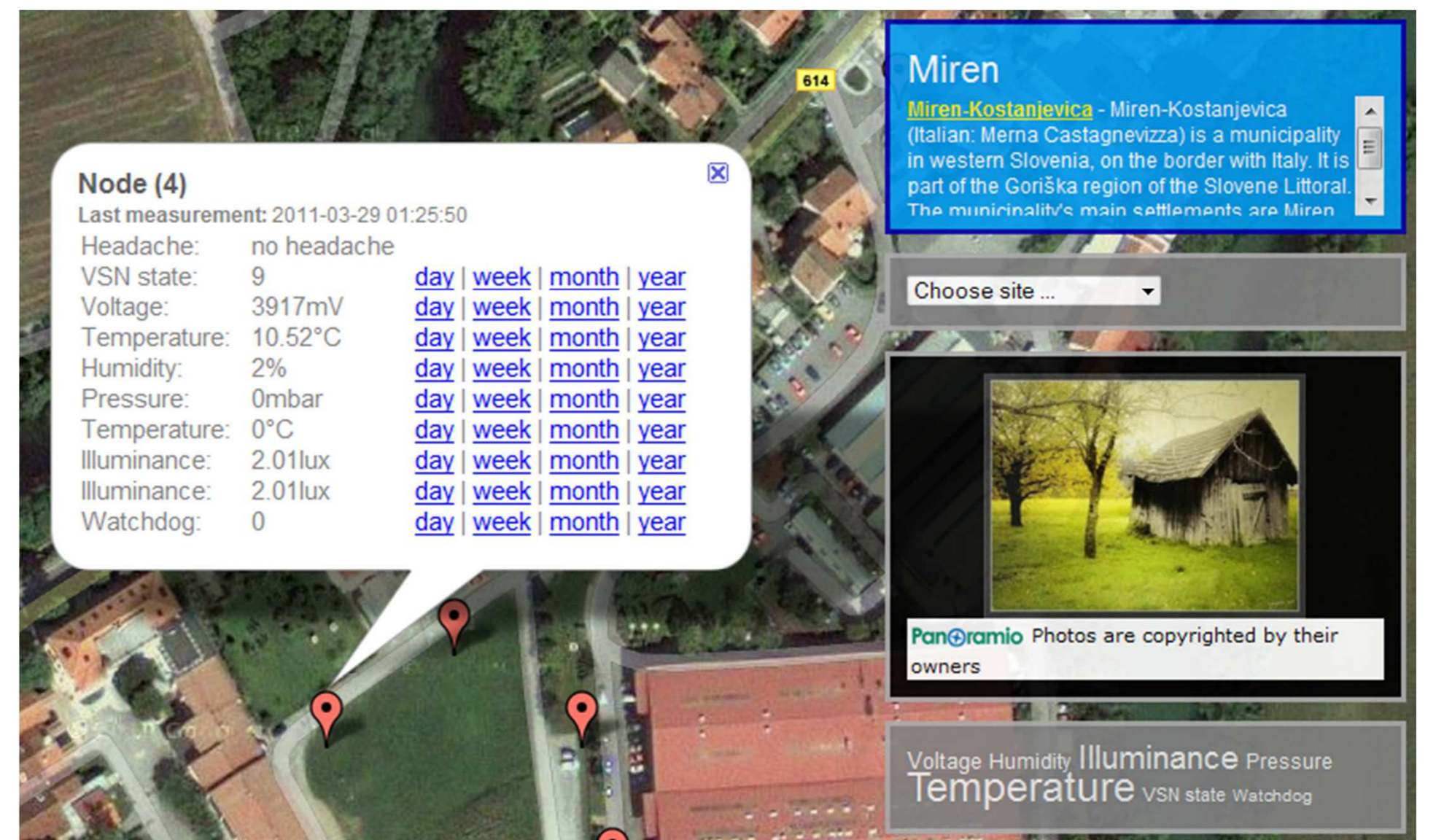
INTRODUCTION

Videk

- a mash-up for environmental intelligence
- currently uses four sources of sensor and linked data (sensor measurements, Geonames, Wikipedia and Panoramio)
- StreamSense engine for storage and processing.

Videk provides search and visualization functionality for environmental measurements, aggregation and enrichment of data.

Provides environmental intelligence in real time.



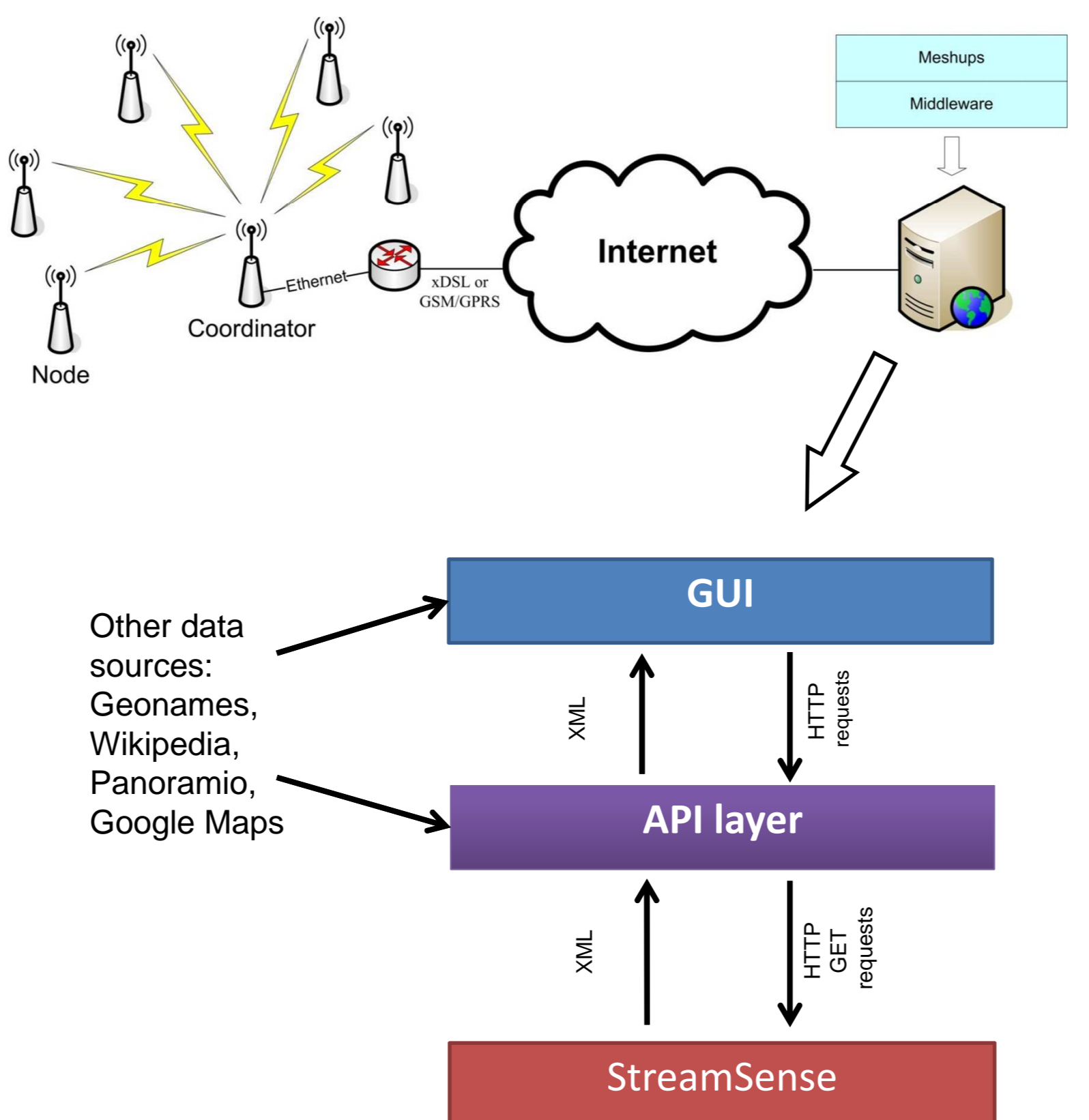
ARCHITECTURE AND DATA

Components

- Sensor data and meta-data automatically collected from nodes through proprietary protocol
- processing server: StreamSense
- front end: Videk mash-up
- open API

Sources of data

- sensor measurements from the Smart Objects from the five deployments in Slovenia (~115 streams)
- Geonames
- Wikipedia
- Panoramio



STREAMSENSE

- storage and processing engine
- a store abstraction with tightly coupled data mining and machine learning techniques
- provides interfaces and means of information collection from Smart Objects
- generic APIs for data feeds on one hand; and interfaces to application developers on the other.
- efficient stream indexing
- Videk uses K-Means clustering of sensor nodes based on their location.
- aggregates data and detects events (headache occurrence based on atmospheric pressure)
- search and ranking strategies (in the course of integration).

TESTBEDS / DEMOS

1. Hyperthermia detection in stables
2. Remote observation of sport-fishing conditions
3. Light-pole demo
4. Remote observation of Kayak center condition

