

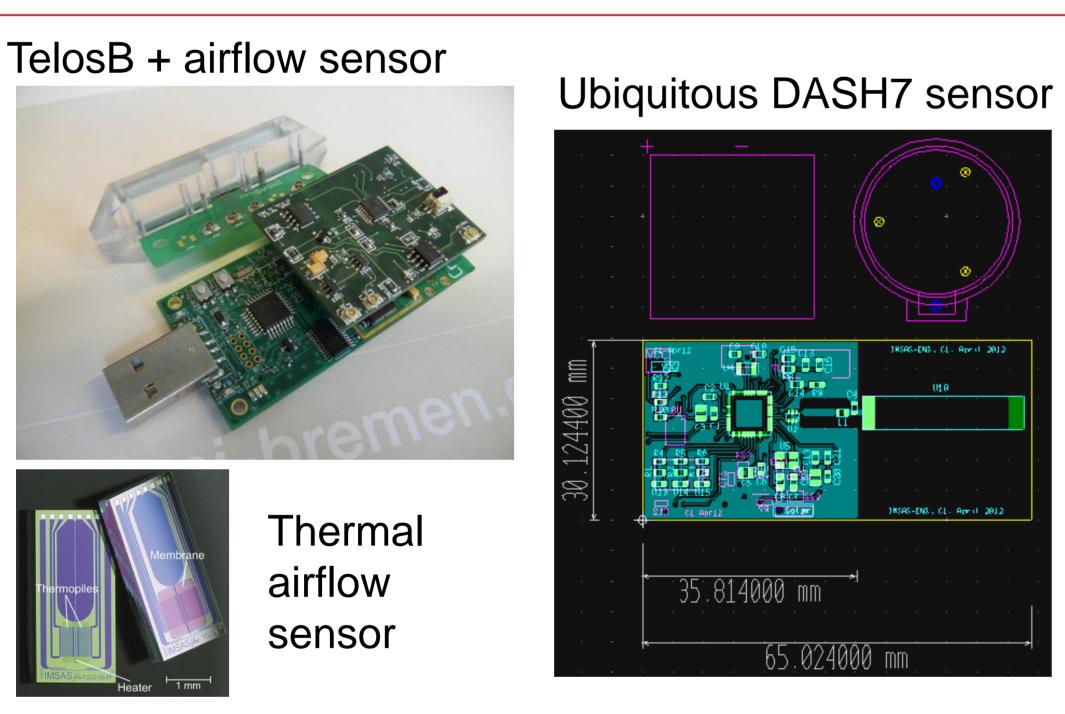
Airflow pattern analysis in containers

DASH7 inspired airflow sensor networks in banana containers



Motivation

- Temperature inhomogeneity in fresh produce transport containers
- Quality degradation due to temperature hotspots
- Lack of credible research in local airflow pattern recognition in temperature-controlled containers



Methodologies

- Analysis of best-suited calibration techniques for thermal airflow sensors
- DASH7 inspired wireless, ubiquitous airflow sensor network for local airflow speed measurement in containers
- Airflow and temperature temporal analysis in banana pallets and boxes

Calibration results – different power levels and flow rate 20 15 10 10 20 10 20 300 400 Sequence number 20 10 20 10 20 300 400 Sequence number 20 10 20 300 400 Sequence number 20 100 20 300 400 Sequence number

Expected results and objectives

- Establishment of credible and reliable airflow data sets in banana containers for analysis
- Airflow pattern and behaviour determination in refrigerated containers
- Implement fore-warning system to compliment temperature related quality degradation systems for banana transports using Airflow vs. Temperature analysis



