2020 International Smart Cities e-Forum

Application of UAV-based multiple spectrum sensing in the Smart Cities

Introduction

Typical UAV applications

- Security guarding (public/private sectors)

Introduction

Typical UAV applications

- Emergency response

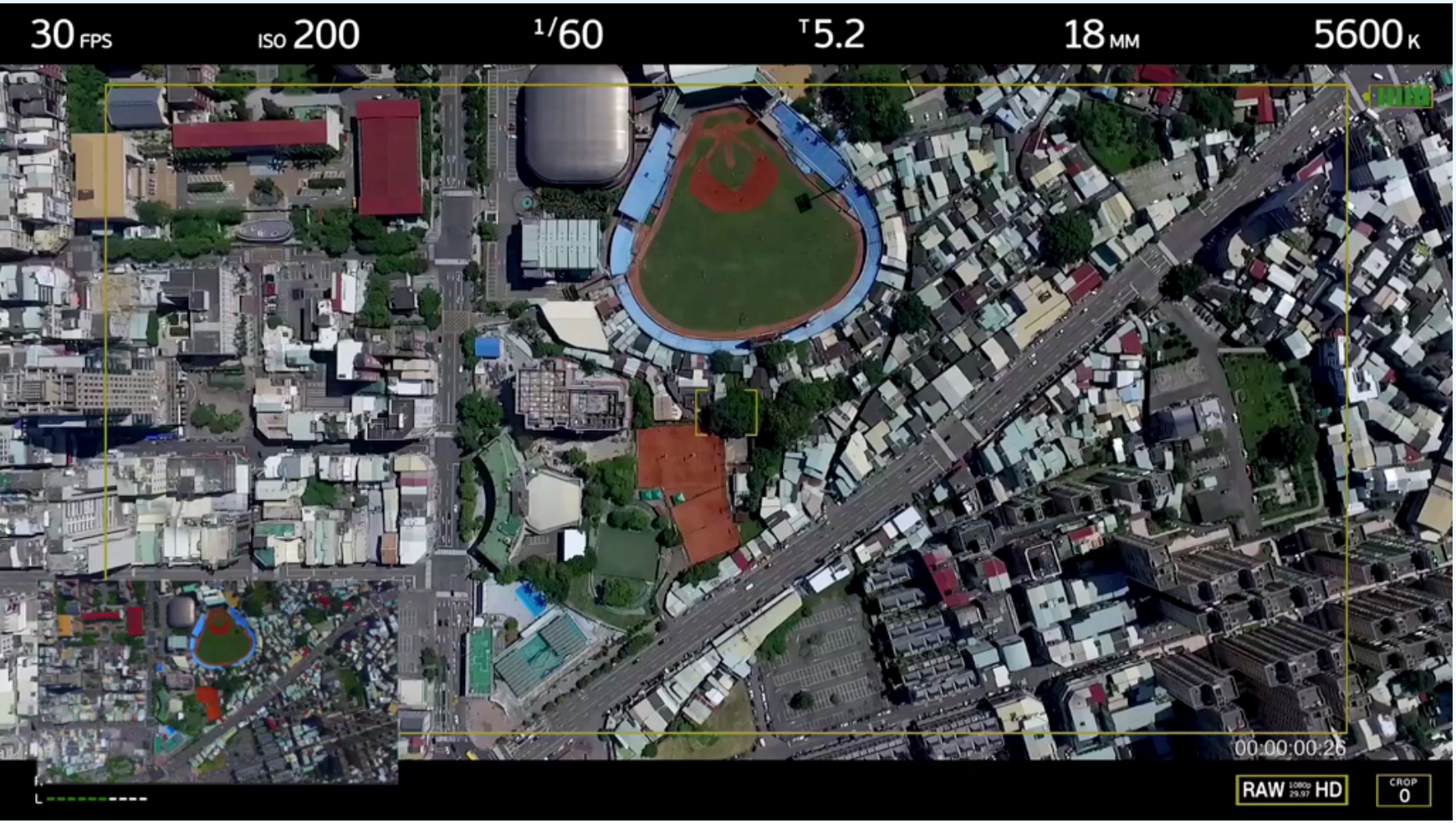
Introduction

Typical UAV applications

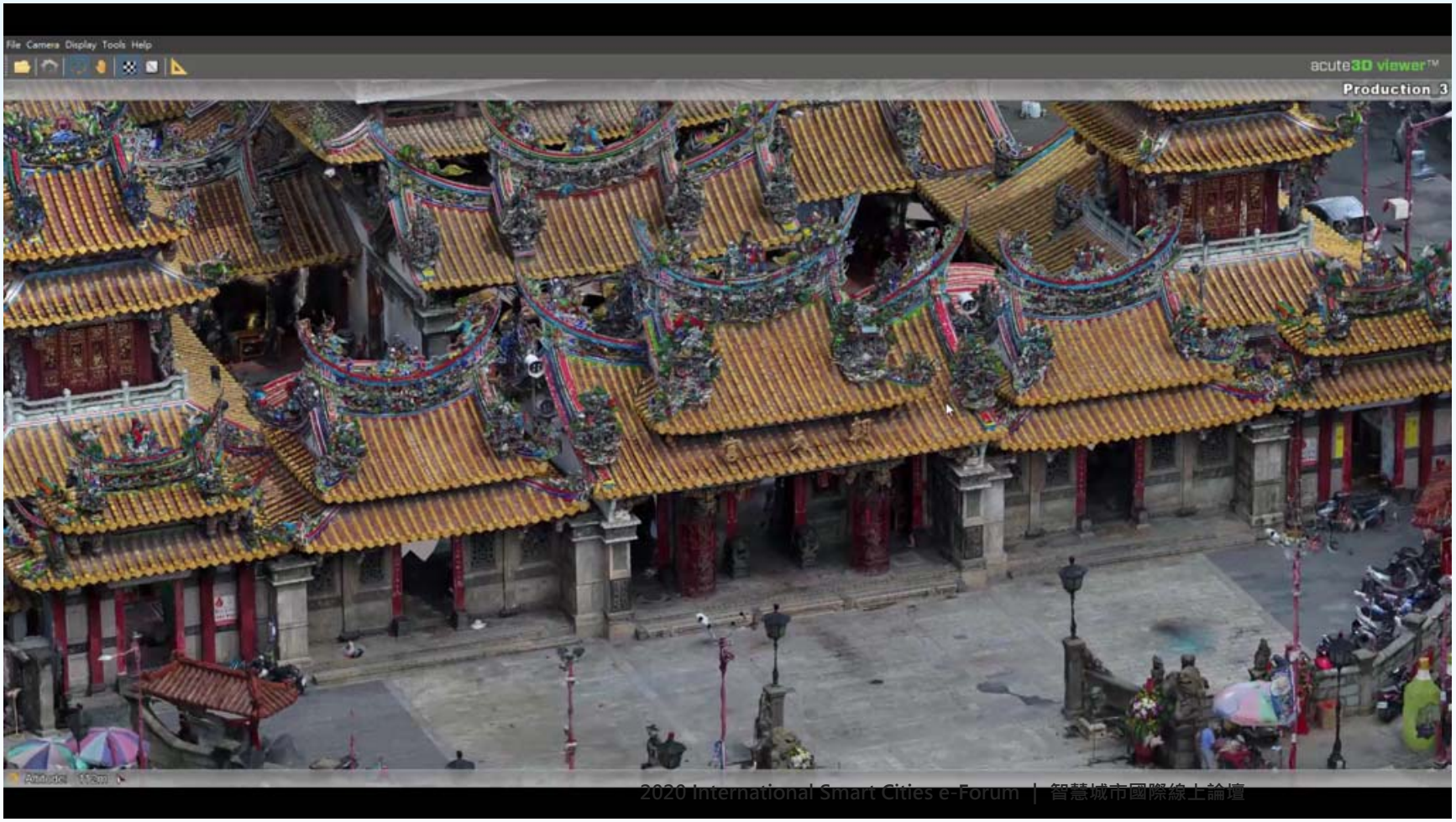
- Infrastructure inspection

Introduction

Surveillance Purposes- Visible light (RGB Camera)



Heritage Preservation – Visible light (RGB Camera)

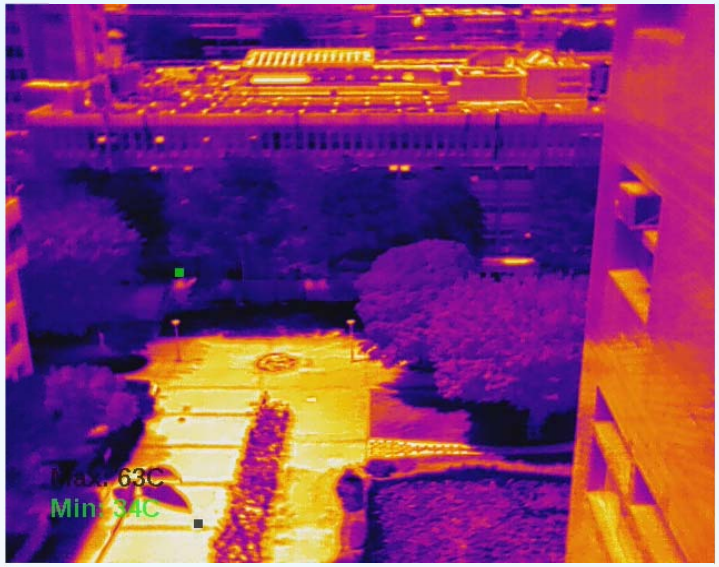


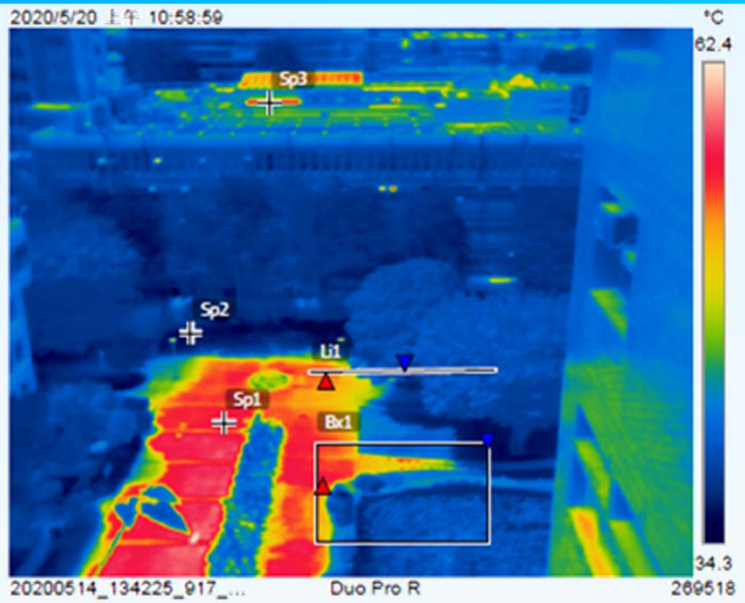
UAV-based multi-spectrum sensors

- Thermal sensor
- Near infrared camera

UAV-based multi-spectrum sensors

UAV-based thermal sensor

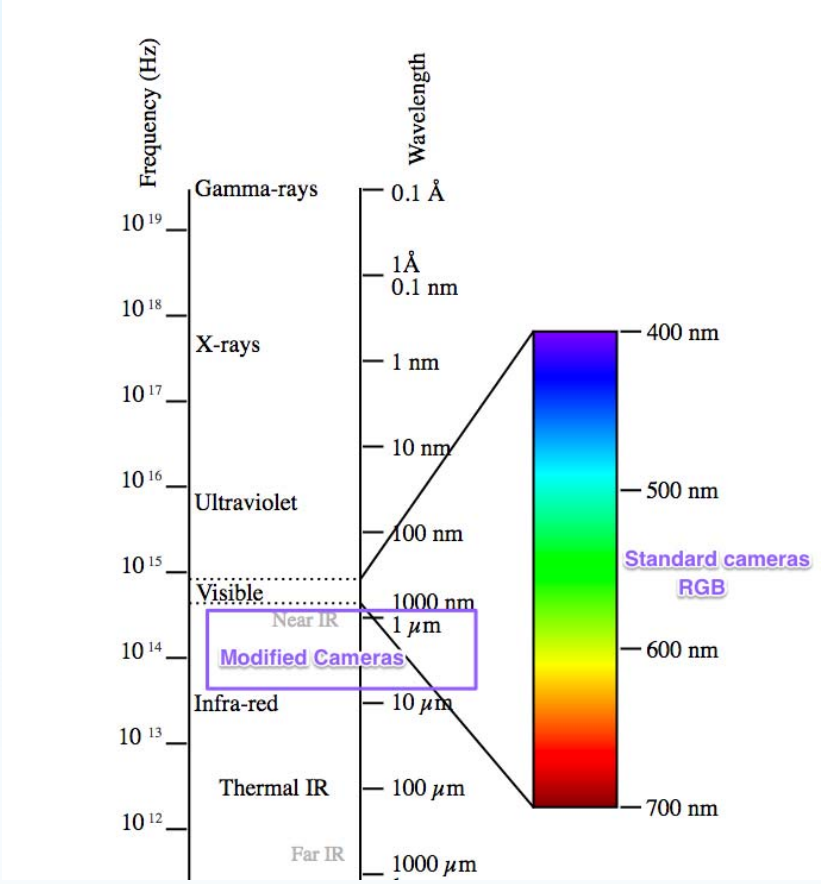




Investigate…

- Hot island effect
- Future urban planning
- Environmental friendly building materials

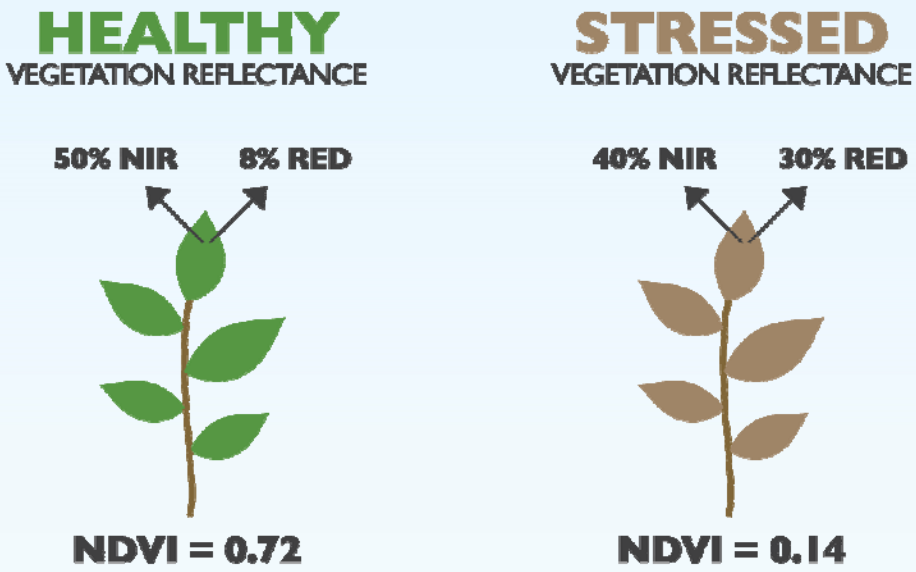
UAV-based Near Infrared sensor



UAV-based Near Infrared sensor

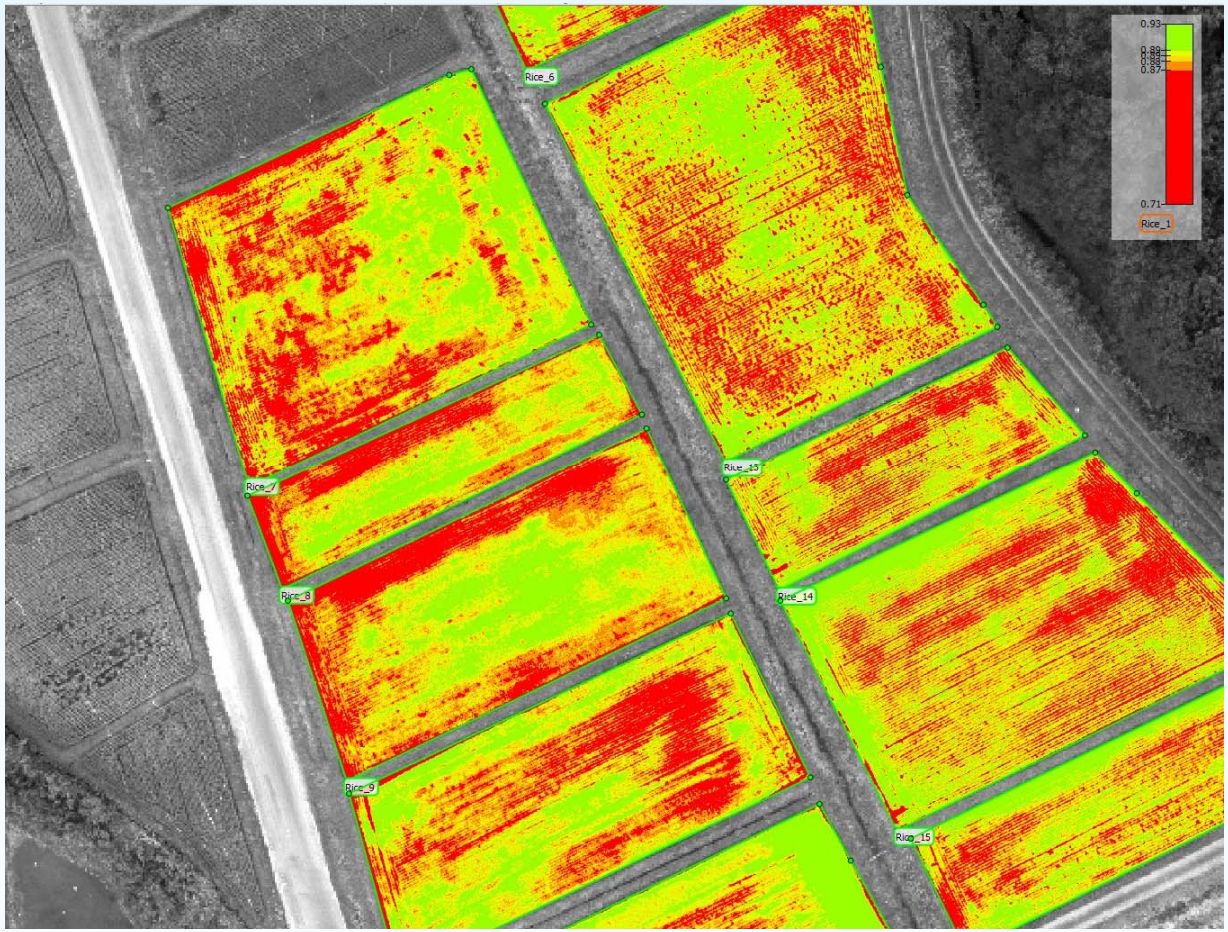
Index reflective…

- Crops growing situation
- Agricultural production forecast
- Drought monitoring



$$NDVI = \frac{NIR - RED}{NIR + RED}$$

UAV-based Near Infrared sensor



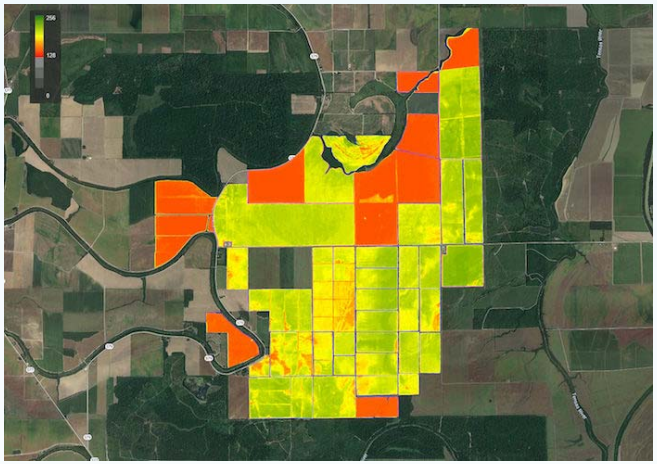
UAV-based Near Infrared sensor

- Urban temperature comparison over the time
- Reviewing city development
- Assisting future planning

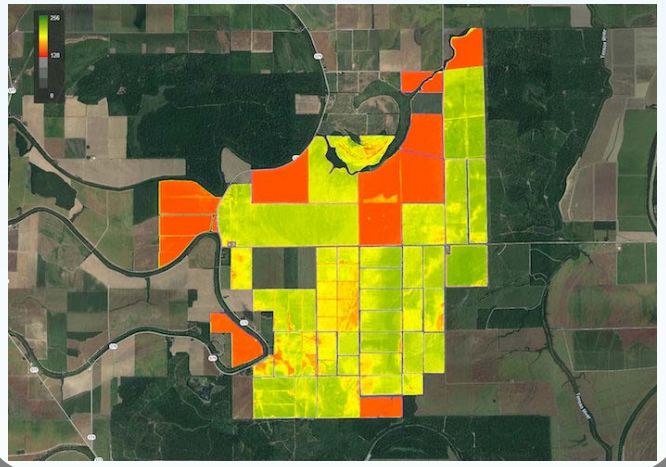
UAV-based Near Infrared sensor

Smart Agriculture

- Productivity forecast
- Marketing strategy
- Logistic planning



UAV-based multi-spectrum sensors



Different Category

Chart Display

Trend Analysis