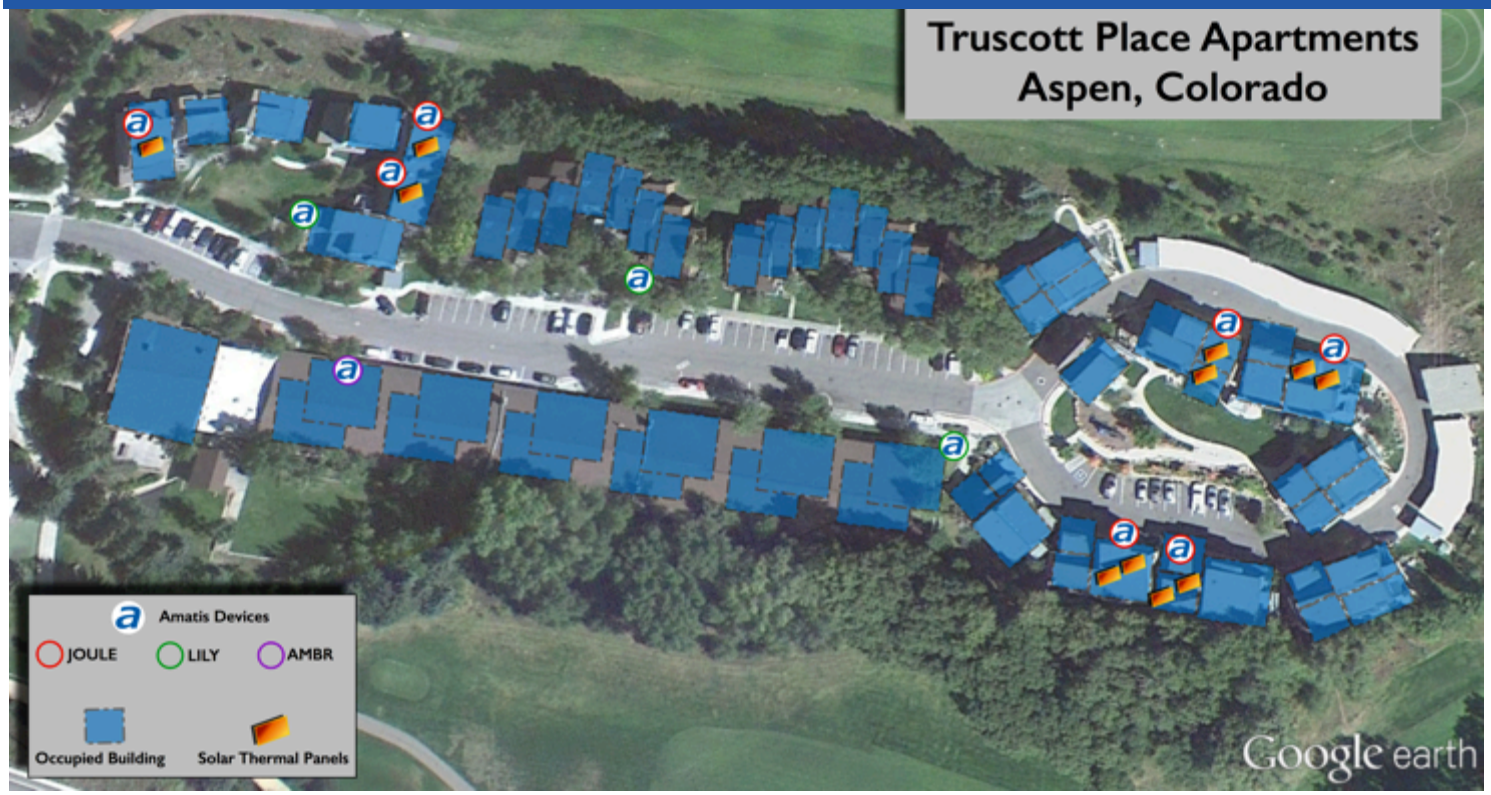
amatis™
THE ENERGY OF THINGS

TRUSCOTT PLACE CASE STUDY



INSTALLATION DETAILS

- 11 Solar Thermal Panels
- 7 Amatis Joule Meters
- 4 Amatis Lily Repeaters
- 1 Amatis Border Router (AMBR)
- All devices communicate via IP6 wireless radio frequency
- Devices report real-time data to web-based Energy Dashboard
- Reliable wireless reporting at distances over 1000 feet
- System errors reported directly to owner and installer via email

PROJECT OVERVIEW

Truscott Place is a multi-unit apartment complex owned and operated by the City of Aspen/Pitkin County Housing Authority. The complex has 400 units, housing 1,200 people. In 2012 Truscott installed solar thermal collectors throughout the campus to provide tenants with domestic hot water. The panels were paid for with help in the form of grants from the Community Office of Resource Efficiency (CORE). Amatis was enlisted in 2013 to provide metering and monitoring for the hot water systems.

THE AMATIS JOULE

The Amatis Joule monitors the performance of solar water heating systems. Joule calculates heat produced by solar collectors and delivers performance data to the web-based Energy Dashboard in real-time. Joule meters exactly how much solar thermal energy is provided for different domestic hot water uses. Advanced monitoring also offers an insurance policy against undetected system failure.

The Amatis Joules installed in Truscott operate on an IP6 wireless network technology. After the Amatis Border Router (AMBR) is installed, it communicates over radio frequency to the IP Pan chip located in each Joule meter.

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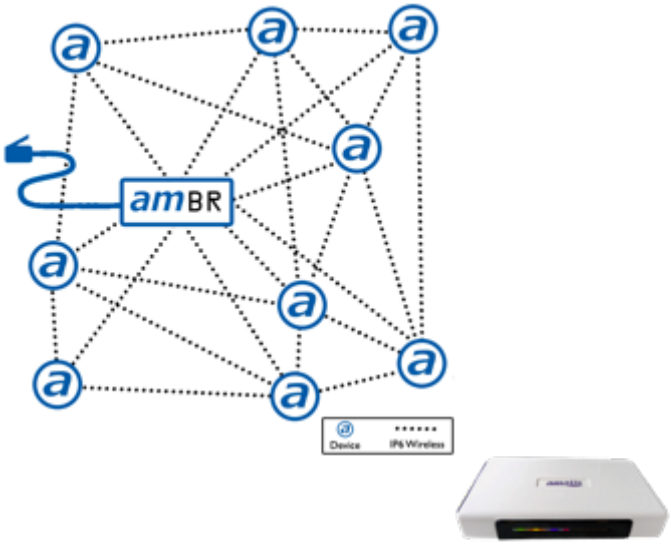
OPERATING A SMART CAMPUS

When presented with the task of keeping track of the energy efficiency for 14 buildings, the managers at Truscott sought help from Amatis. Our meters provide real-time updates – every 5 minutes – straight to the Amatis web-based user dashboard. The dashboard can be accessed remotely from anywhere with an Internet connection. The building managers at Truscott will know immediately if there is any hint of system failure. The real-time notifications will also alert property managers if the temperatures are abnormal – perhaps from a door left open in the winter. If there are any abnormalities, your Amatis system will let you know.



AMATIS IP6 WIRELESS MESH NETWORK

Amatis utilizes stable and secure IP6 wireless mesh networks that link AMBR with all the meters, monitors, and controls installed across the Truscott campus. AMBR is installed in the front office and connected to the internet via a reliable Ethernet connection. A mesh network is established via 6LoWPAN radio frequency. Devices determine the best signal routes to transmit data to AMBR and repeaters are used to strengthen signals and navigate long distances. As more devices are added the network connections become stronger.

AMATIS ENERGY DASHBOARD

The building managers navigate the Amatis Dashboard with a series of icons. These widgets summarize the cost savings, carbon savings, balance of renewable vs. grid power energy, and more. The robust graphing feature is the heart of the Amatis Dashboard. The users select specific data points – at a granular level – to view the exact harvest from their solar thermal system, or total kilowatt hours used to power the house in the last 24 hours and much more. Without the Amatis system, the owners would have no idea how much they were harvesting from the solar installation.