Media Backgrounder: Wi-SUN Alliance

- **Name:** [Wi-SUN Alliance](#)
- **Founded:** 2012 with the association's office based in San Ramon, CA
- **Who:** Global member-based association made up of industry leading companies
- **Mission:** To drive the global proliferation of interoperable wireless solutions for use in smart cities, smart utilities and other Internet of Things (IoT) applications using open standards
- **Membership:** Silicon vendors, product vendors, service providers, utilities, academia, enterprises, and cities, municipalities and government organizations.
- **Key spokespeople:** Phil Beecher, President and CEO, Wi-SUN Alliance.

Overview

Wi-SUN Alliance is a global member-based industry association. Founded in 2012, its goal is to drive the adoption of wireless solutions in markets serving the Internet of Things (IoT).

Wi-SUN Alliance seeks to accelerate the implementation of smart cities, smart utilities, smart grids and other large-scale outdoor IoT applications by enabling the global adoption of interoperable solutions based on open standards**.**

It creates communications layer specifications based on open standards from organizations, such as IEEE802, IETF, TIA, TTC and ETSI, and develops robust testing and certification programs guaranteeing that products that implement the Wi-SUN specification interoperate.

The Alliance has certified around 180 products worldwide, including many for the connection of smart meters to home energy management systems.

In 2018 Wi-SUN Alliance launched its Wi-SUN FAN (Field Area Networks) program, which defines a communications infrastructure for large-scale outdoor networks. The Wi-SUN FAN Certification Program certifies devices for use by utilities, cities and service providers to simplify large-scale smart cities, smart utilities and other IoT rollouts.

Smart Cities and Utilities

Cities and utilities around the world are ramping up deployment of smart technologies to accelerate progress towards their sustainability goals and to drive digital transformation projects. These technologies offer a range of proven benefits, including energy savings, reduced costs and enhanced citizen safety.

Smart cities can leverage the existing wireless communications infrastructure provided by Advanced Metering Infrastructure (AMI) or street lighting networks to enable other applications, such as smart signals, public transit, parking, electric vehicle charging and more.

Wi-SUN FAN can be used in a wide range of applications for both smart cities, including Infrastructure management, street lighting, parking, traffic and transport system, and for smart utilities, including AMI, distribution automation, and smart metering.

A report[1] by IoT Analytics identified Miami as the world's number one city for connected streetlights, with nearly 500,000 units of connected streetlights supported by Wi-SUN technology. Paris is number two with 280,000 connected streetlights retrofitted across the city with a Wi-SUN capable mesh network.

In addition, the City of London, one of the largest financial hubs in the world, is deploying 12,000 streetlights in a two-year project, supported by Wi-SUN FAN-capable network technology. Based on open standards, Wi-SUN functionality will allow the City to integrate new devices onto the network, including traffic and parking monitoring, occupancy sensing, environmental monitoring, asset management and lighting control.

Membership
With more than 250 members, and led by promoter members Cisco, Itron, Landis+Gyr, NICT, Omron, Renesas, Toshiba and Trilliant, Wi-SUN Alliance membership is open to a range of industry stakeholders, including silicon and product vendors, service providers, utilities, academia, enterprises, cities, municipalities and government organizations.

Representing 27 countries across Asia Pacific, the Americas, Europe, Middle East and Africa, Wi-SUN members include globally recognized companies, as well as national companies and utilities.

Currently there are more than 95 million Wi-SUN-capable devices awarded worldwide according to Navigant Research.

Wi-SUN FAN (Field Area Networks)
The Wi-SUN FAN profile is a wireless communications specification derived from applicable open standards, suitable for large-scale outdoor networks. Cities and Utilities benefit from using products compliant with the Wi-SUN Alliance FAN profile and interoperable with other Wi-SUN FAN products. Wi-SUN Alliance manages a certification program to ensure products are compliant and that they interoperate.

Adhering to the Wi-SUN FAN profile enables service providers, cities and utilities to deploy adaptable multi-service networks and will ensure interoperability today and in the future. The Wi-SUN FAN Certified logo is a recognized brand and gives the marketplace confidence that products can work together in a multi-vendor network.

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[1] Connected Streetlights Market Report from IoT Analytics: https://iot-analytics.com/top-10-cities-implementing-connected-streetlights/

Key strengths

- *Security* – Enterprise-grade security is the gold standard among IoT networks; only Wi-SUN-based networks achieve this level of security.
- *Scalability* – Wi-SUN FAN-based mesh networks have proven themselves across a range of challenging urban and rural environments around the world. Tens of millions of reliably connected endpoints demonstrate that a Wi-SUN FAN-based mesh network can achieve the ubiquity and scalability many IoT customers demand.
- *Resilience* – Wi-SUN FAN networks offer resilience against faults and interference. For example, it is extremely difficult to disrupt a Wi-SUN network, e.g. through a DDoS attack.
- *Adaptability* – Wi-SUN adapts to the landscape and environment as it evolves, so a Wi-SUN network will re-route around a high-rise building or optimize routes for data transmission.

Industry statistics

- According to Rethink Technology Research, companies in the Wi-SUN Alliance ecosystem are set to enjoy continued growth at 20% CAGR, as mesh network technology reaches into new verticals and different business models are developed.
- Gartner forecasts that endpoints of the IoT will grow at a 32.9% CAGR from 2015 through 2020, reaching an installed base of 20.4 billion units.
- A report by Bank of America Merrill Lynch – '*21st Century Cities: Global Smart Cities Primer Picks'* – predicts smart technologies market will grow to $1.6 trillion by 2020.
- IoT Analytics estimates that the global connected streetlights market will surpass US$3.6 billion in 2023 and will grow with a CAGR of 21%.
- Accenture estimates the global market for Industrial Internet of Things (IIoT) is projected to grow at a 7.3% CAGR through 2020 and could add $14.2T to the economy.
- Verizon's annual study of IoT adoption finds manufacturing dominating network connection growth, growing 84%, followed by energy/utilities, transport & distribution and smart cities.

For more information, visit: https://www.wi-sun.org

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