Introducing 1663 Resolve™: Affordable, Reliable, and Enriched Asset Tracking

1663
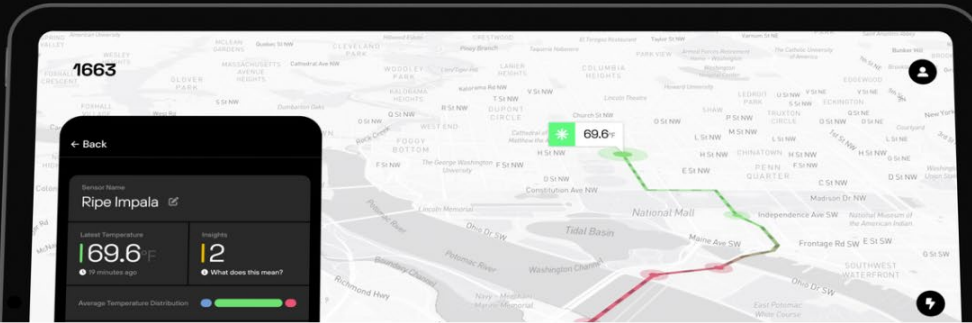Jul 20, 2023 • 6 min read

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1663™, the Internet of Things (IoT) arm of Nova Labs, is excited to announce 1663 Resolve™ ("*Resolve*"). As an innovative, custom-built solution, Resolve enables data-rich asset tracking and insight management to support a large variety of sensor types, location features, and system integrations.

This patent-pending solution delivers immediate upgrades to traditional tracking applications, including:

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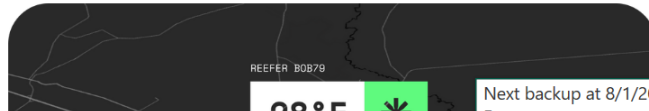
This patent-pending solution delivers immediate upgrades to traditional tracking applications, including:

- Affordability - Cost-effective devices and connectivity
- Reliability - Accurate data provided by long lasting sensors
- Visibility - Powerful dashboards to better understand nuances of the data

Whether tracking perishable produce throughout the supply chain, or monitoring an important delivery in transit, asset tracking solutions represent one of the core use cases of what's possible on the Helium Network. With over 450,000 active Hotspots online across the world, the people-powered Helium Network provides the robust coverage required to ensure reliability at a global scale.

With this in mind, 1663 has made helping organizations track their assets one of its top priorities. Resolve-enabled sensors offer long range communication, years of battery life*, and simple implementation.

*Battery conditions may not reflect real-world usage. Actual battery life may vary depending on uplink frequency and additional factors. "Years of battery life" is an estimate given that a device uplinks 1-2 times an hour.

Our hypothesis: While tracking non-location metrics provides clear value for businesses, enriching that data with location features is a critical component missing in the industry today.

Thanks to the LoRaWAN ecosystem, the development of more affordable, long-lasting sensors have arrived on the market in recent years. Combining these new sensors with the global coverage of the Helium Network allows developers to innovate as the density of the Network can remove the need for expensive cellular connectivity or user-deployed gateways.

Based on this data and industry trends, the 1663 team went to work building, and **today we are excited to share our new, customizable, end-to-end, location-enrichment solution:** Resolve. Resolve is built on three key pillars: an innovative algorithm, enriched datasets, and a customizable user experience.

Traditionally, the most accurate way to track an asset's location was by utilizing sensors with built-in GPS. However, these GPS devices suffer from expensive hardware, poor battery efficiency, high cellular connectivity, and are often bulky in size.

Resolve's location-enrichment removes these obstacles by using the signal strength of nearby gateways to approximate location, which allows this data to be *inferred* for any device connected to the network. This removal of GPS requirements ushers in a new wave of radically cheaper tracking devices that prioritize longer battery life and lower costs, while adding valuable additional metrics like temperature, humidity, accelerometer, and vibration data. Combining Resolve with the massive density of the Helium Network opens up the asset tracking market to a greater number of businesses and use cases.
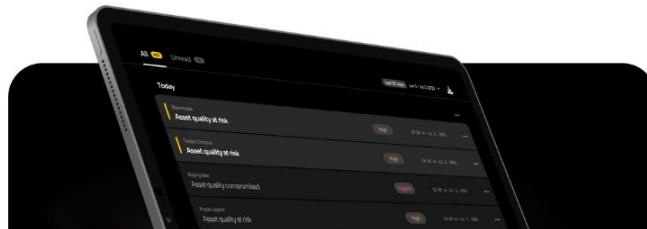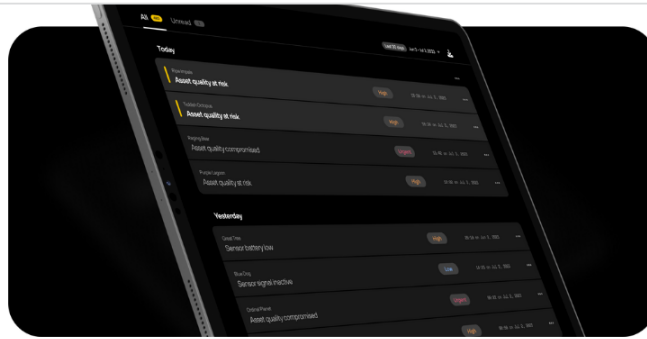
Innovative algorithm

Resolve uses a patent-pending algorithm to provide estimations of the location of a tracked asset on the Helium Network without needing GPS-based sensors. Instead the algorithm uses RSSI (received signal strength indication) and SNR (signal to noise ratio) to estimate a location. This results in smaller, lower-profile, affordable sensors with longer battery life.
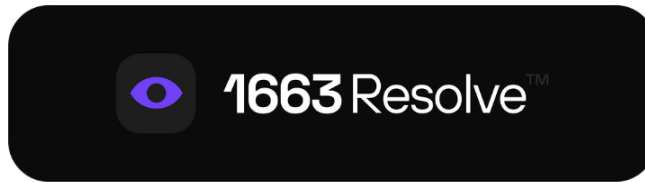
Enriched datasets

After working with one of the largest grocery chains in the United States, it became clear that location data isn't the only metric that large enterprises find valuable when tracking assets. In this case, monitoring produce temperature while in transit was just as valuable as the actual location data. Discussions with additional customers validated the desire to collect other critical datasets, such as speed/acceleration metrics for determining package tampering and poor handling. Instead of building custom one-off solutions for every unique metric, Resolve was built with these features in mind by offering the ability to collect location data utilizing any traditional LoRaWAN sensor.

Customizable user experience

Finally, Resolve uses intuitive dashboards and visualizations to bring the enriched data to life.

Companies care more about the value the data brings to their business decision making than the technical details of how it's collected. Resolve's dashboards help separate signal from noise and provide insight into the information companies care about, enabling business decisions with innovative user experiences that make the data easy to understand, audit, and leverage. Offering full customization, the team at 1663 is prepared to tailor these dashboards to fit any business need.

1663 Resolve: The Future of Asset Tracking

Combining an innovative algorithm, enriched datasets, and customizable visualizations, Resolve is a powerful solution that changes the landscape of the IoT asset tracking industry. To learn more about 1663 Resolve, schedule a demo, or explore additional end-to-end solutions offered by 1663, contact us today.

Email us at sales@nova-labs.com or visit our website at 1663.io

To learn more about Resolve, register for the webinar on 8/10: