Mini glossary: wireless communication terms you should know

Understand the tech behind clearer, safer, and smarter communications

At Globalsys, we know that **wireless communication** isn't just about devices ; it's about performance, clarity, and mission-critical reliability. But let's face it: some of the terms that define this field can sound like they were made for engineers only.

Whether you're in <u>ground handling</u>, <u>defense</u>, or <u>industrial operations</u>, understanding the basic building blocks of wireless communication can help you make smarter choices ; and appreciate the innovations behind your equipment.

Here's a quick and **practical glossary** of the most common (and sometimes confusing) terms in our industry.

Full Duplex

Definition: A communication system where both parties can **speak** and **listen simultaneously** ; just like a natural conversation.

Why it matters:
In high-pressure environments like <u>airport ramps</u> or on <u>naval decks</u>, communication delays or interruptions can lead to operational risks. Full Duplex ensures that team members don't have to wait for their turn to speak ; instructions, alerts, and confirmations can happen in real time.

In practice:
All Globalsys systems are built with Full Duplex communication as standard. It's part of our commitment to **safety** and **operational fluidity**.

DECT (Digital enhanced cordless telecommunications)

Definition: A digital wireless communication standard used for **voice**, **sound**, and **data transmission**, primarily in cordless telephony — but also in professional-grade headsets and systems.

Why it matters:
<u>DECT is reliable</u>, interference-resistant, and operates in a protected frequency band. Unlike Wi-Fi or Bluetooth, DECT isn't affected by the same congestion issues ; making it **ideal for environments with heavy radio traffic**, like airports or military bases.

In practice:
Globalsys systems use DECT technology to provide secure, stable, and interference-free communication ; with extended range and battery life.

Encryption

Definition: The process of encoding messages to prevent unauthorized access.

Why it matters:
When you're transmitting sensitive data ; whether it's from a ground crew to a cockpit or between military operators ; encryption ensures that only intended receivers can understand the information. It's essential for **data privacy** and **operational security**.

In practice:
Our systems integrate **advanced encryption** standards to guarantee secure transmissions in compliance with **military** and **industrial** protocols.

Range

Definition: The maximum distance over which two devices can communicate reliably.

Why it matters:
Longer range means more mobility for your teams ; but it also requires **stable signal performance**. Not all wireless systems can promise both.

In practice:
Our wireless systems offer **extended range capabilities** (up to several hundred meters) without compromising clarity or safety, even in complex environments.

Interference

Definition: Disruption of a wireless signal by other electronic devices, physical obstacles, or competing frequencies.

Why it matters:
Poor communication due to interference can lead to downtime, mistakes, or safety hazards ; especially in **mission-critical or noisy environments**.

In practice:
We engineer our systems to resist interference ; through adaptive channel switching, shielding, and smart antenna design, so you can focus on the mission, not the connection.

Noise cancellation

Definition: Technology that reduces or eliminates unwanted background sound from audio transmissions.

Why it matters:
Aircraft engines, industrial machinery, or **stormy weather** ; these are just some of the noises that can make communication nearly impossible. Active noise cancellation helps your teams hear and be heard clearly, no matter the environment.

In practice:
Globalsys headsets use **active** and **passive noise reduction** to deliver crystal-clear sound in the noisiest settings.

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