BEST PRACTICE DAYS 12. Oktober bis 06. November 2020

Höher, schneller, weiter?

Digitalisierung als Beschleunigungsfaktor!



Best Practice Day 2020 Kollaborative Lösungen auf Basis

Präsentationstitel Kapitel



offener Standards - Beispiel omlox

The open # locating standard.

HERME

AWARD

2020

Gewinner

ROFIEL

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Agenda

Wie kam es zu omlox? Übersicht omlox: CoCreate für den Kunden Potentiale der Zusammenarbeit

Wie kam es zu omlox?

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Rising complexity requested the real-time optimized smart-factory

Many data are missing or are not available in real time.....



6 | Eberhard Wahl - New Business Technology

Real-time capable

Smaller lot sizes, changing products and higher variety were the main drivers for growing complexity.....























Industrial use-cases ... endless examples where location is an important enabler











Übersicht omlox

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omlox is an independent locating standard hosted by PI



The world's first open industrial locating standard.

Launch 06/2020



- •
- and software solutions
- Carriers, ISVs and Hardware providers

What is omlox?

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Open Ecosystem > 60 partners • Key vendors in industrial sensing, automation



- Open UWB Infrastructure
- Interoperable, Indoor-Outdoor, Realtime
- Multi-Positioning Technology

System architecture overview

Industrial Applications





Location zones

• O Asset tracking	• is the second		Image: Analytics		Navigation a		o •••• nd other Applications
omlox hub API							
omlox hub							
			omlox	hub API			
omlox complementary zone	omlox complementary zone	omlox core zone	omlox core zone infrastructure			omlox complementary zone	omlox complementary zone
			omlox air-interface				
e.g. RFID	e.g. 5G/GPS	Automated	Sensors	Satellites & Marker	Drones	e.g. BLE	e.g. SLAM

The omlox hub



Standardized interfaces allow for competition on each layer



What are my benefits with omlox?

What are my benefits? CoCreate für den Kunden!

The omlox core zone





could fit to cloud service

could fit to solution providers

omlox makes location data affordable



What are my benefits with omlox?



With omlox you know exactly where your part is along the supply chain

Omlox hub can facilitate intralogistics and supply chain transparency



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Many industry segments will be disrupted

omlox does have the potential to totally disrupt existing industry segments. Some of them are listed below: Fully disrupted (the complete global annual revenue will flow into this platform)

Fully disrupted (the complete global annual revenu Location handling SW Professional Building access technology Attendance recorder business

Partly disrupted

Machine / Factory control (incl. MES, human-machine interface, order-papers ..) Gate based booking (RFID, barcode, terminals) Autonomous indoor transportation Human Navigation & real-time AR-content Freight management / storage / transport hubs Inspection of building structures Inspection of technical equipment Janitorial services Supply and transport insurances 5G / Lighting / fire-detectors

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the omlox core zone - technology deep dive

Interoperability due to an open air-interface

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The omlox core zone

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Why does omlox use UWB for physical reference?

- omlox needs to be able to handle
 NLoS situations and reflections with sheet metal
- Under these common industrial circumstances, only UWB has the necessary accuracy and robustness

omlox is supplying the best performing location scheme The omlox configuration is marked in green





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Typical customer evolution path

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N om ox The customer typically starts with tracking & booking



Many tasks known today, will become obsolete:

- Task-confirmation obsolete (Fertigbuchung – entfällt)
- In-storage booking obsolete 2) (Einlagerungsbuchung – entfällt)
- Stock-removal booking obsolete 3) (Auslagerungsbuchung – entfällt)
- Raw-material request obsolete 4) (Materialbedarfsmeldung - entfällt)
- 5) Input terminals – obsolete (BDE-Terminals – entfallen)
- Start transport task obsolete 6) (Transportauftrag generieren – entfällt)

Real-time digital shadow with no effort

real-time position tracking of goods, triggering actions based on location, without lock-in **Drastically reduction of waste – this is omlox**



Based on omlox autonomous actions can be added



Many tasks known today, can run autonomously:

- Setup & training for AGVs obsolete (Einrichtung und Lernfahrten – entfällt)
- Special tasks programming for AGVs obsolete 2) (Neue Routen / Sonderfahrten einrichten – entfällt)
- Open doors obsolete 3) (Türen / Rolltore öffnen – entfällt)
- Adapt the top speed obsolete 4) (Anpassung Staplergeschwindigkeit – entfällt)
- Start robot unloading obsolete 5) (Entladeprozess starten – entfallen)
- Start robot loading obsolete 6) (Beladeprozess starten– entfällt)

Autonomous processes based on location awareness, simple and reliable absolute navigation for AGVs, drones and more, **Drastically reduction of waste – this is omlox**

Navigation is one of the coming Top-use-cases In many videos about AR in smart-factories location based content is needed

https://vimeo.com/383723687 shows a nice example from tooz technologies.

The problem: Just by entering the plant, How does the technician get his position and How does he receive the **location aware content?**

A standard is needed!

It is there, it is omlox!

Eberhard Wahl Head of New Business Technology omlox working-group leader use-case

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