

# RFID Applications in Healthcare Business



**NORDIC RFID CENTER**

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## FEIG ELECTRONIC GmbH **OBID® - Welcome to RFID**



**Qualitätsmanagement**

Wir sind zertifiziert

Regelmäßige freiwillige  
Überwachung nach ISO 9001:2008

- More than 20 years experience in RFID
- Independent manufacturer of RFID Reader and antennae
- All OBID® products developed and manufactured by FEIG
- Standard and customized products
- Certification in accordance to DIN EN ISO 9001:2008
- Individuell services through product and technology trainings

## RFID – today – status of markets

Tag/Reader turnover per frequency		Forecast world wide: 2008 to 2014						
Frequency	Revenue	2008	2009	2010	2011	2012	2013	2014
LF - Car Immobilization	(\$ Millions)	955,8	849,1	846,5	826,0	803,7	781,9	785,7
LF	(\$ Millions)	511,5	543,8	603,1	692,3	810,7	952,3	1.122,6
HF (13.56 MHz)	(\$ Millions)	1.523,9	1.613,0	1.974,2	2.258,9	2.614,7	2.966,1	3.344,7
UHF - passive	(\$ Millions)	498,9	599,7	773,8	983,4	1.232,5	1.517,3	131,1
UHF - active	(\$ Millions)	33,2	38,0	45,5	55,5	66,5	76,9	86,1
Microwave	(\$ Millions)	10,3	13,1	17,2	23,4	32,3	43,5	57,9
<b>Total</b>	(\$ Millions)	<b>3.533,5</b>	<b>3.656,7</b>	<b>4.260,4</b>	<b>4.839,5</b>	<b>5.560,3</b>	<b>6.338,1</b>	<b>5.528,0</b>
Total without Car Immobilization	(\$ Millions)	2.577,8	2.807,5	3.413,8	4.013,5	4.756,6	5.556,2	4.742,3

Source: ABI Research / Frithjof Walk

## RFID – today – status of markets

### Reader/Tag market share of frequencies

2010

Frequency	Market share 2009		Market share 2010	
LF – car immobilizer	37,80%	51,40%	19,87%	34,03%
LF	13,50%		14,16%	
HF (13.56 MHz)	40,60%		46,34%	
UHF - passive	2,70%		18,16%	
UHF - active	1,10%		1,07%	
Micro wave	4,30%		0,4%	

## RFID – status today

- RFID is more and more a mature market
- authorities and political bodies concerns RFID regulative (Privacy)
- standardisation groups going on with RFID
- a growing number of universities and research groups are focusing RFID regarding education
- new markets/applications are optimized for RFID, so it is in healthcare !

## Crisis world wide & RFID

- the end of the “RFID hype” met the economical crisis
- the development of markets slowed down over all
- supply chain markets did not start as expected
- the auto id markets almost stopped regarding RFID
- technological developments reduced speed significantly
- **BUT healthcare business (HF/UHF)**  
is working well and permanently for our understanding !

## RFID and Healthcare Business

### Applications/Frequencies

- localisation of items/inventory control of surgical instrument, sponges, etc. (HF)
- tracking and tracking of items/beds/pharmaceuticals/high-value inventory management/assets, even patients (HF/UHF)
- patient files management/connection to needed medicine (HF)
- management of operation rooms.
- smart shelves, cabinets/medicine control (HF and little UHF)
- German blood-giving ID card
- RFID implementation in medical devices (HF)
- ...

## RFID and Healthcare Business

### HF Applications/Products (13.56 MHz)

- Source: Haldor Advanced Technologies Ltd. ([www.orlocate.com](http://www.orlocate.com))

Tool Tray/Back Tray



Tool Add



Sponge Tray



Locator



Sponge Bucket



Console/Sponge Add





## RFID and Healthcare Business

### HF Applications/Products (13.56 MHz)

- Source: LogiTag Systems LTD ([www.logi-tag.com](http://www.logi-tag.com))

#### Smart Cabinet



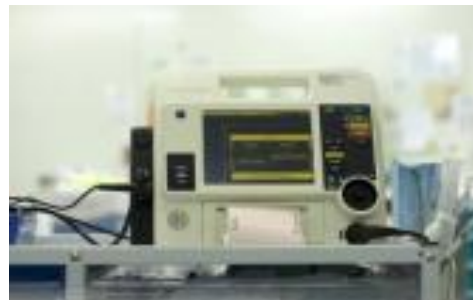
#### StockBox - inventory



#### Smart-Sense system protects newborns



#### Tracking and Monitoring

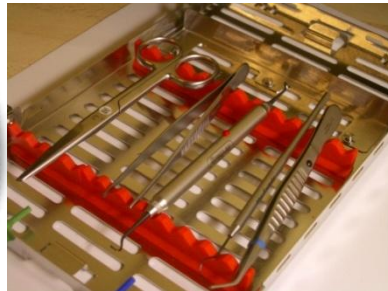


## RFID and Healthcare Business

### HF Applications/Products (13.56 MHz)

- Source: ELMICRON Dr. Harald Oehlmann GmbH ([www.Elmicron.de](http://www.Elmicron.de))

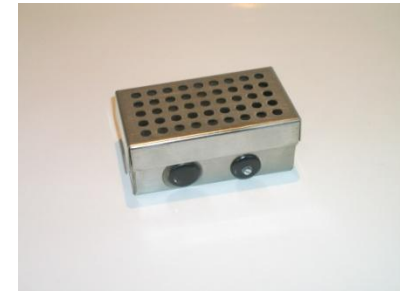
RFID on tools



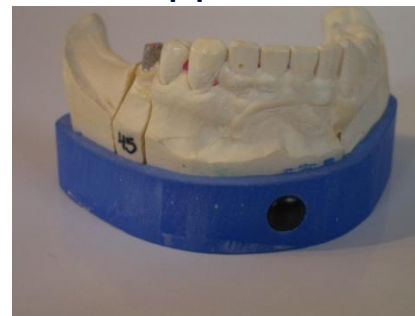
Example of transponder



RFID on cleaning/transport trays



Other application



## RFID and Healthcare Business

### HF Applications/Products (13.56 MHz)

- Source: Smooth & Sharp Corporation ([www.sns.com.tw](http://www.sns.com.tw))

Handheld Reader for patient



Trolley for medicine



Use in the operation room



## RFID Healthcare Applications?

### Further Applications - HF (13.56 MHz)

- Source: Deutsches Rotes Kreuz / German Red Cross

German blood-giving ID card/ID of “blood products”

<b>Blutspenderausweis</b>  <b>Deutsches Rotes Kreuz</b> <b>DRK-Blutspendedienst West</b>	
Frau Dr. med. Sybille Freifrau von Hohenzollern (zusätzliche Zeile für Nachname) *25.01.1942 geb. Schulte-Frohlinde Spendernummer 30067891328	Blutformel <b>A</b> Rh (D) pos. Kell neg. CcD.ee Irreg. Antikörper vom Typ Antikörper 1, Antikörper 2, Antikörper 3, Antikörper 4 Ausstellender Arzt Prof. Dr. med. M. Schulenburg
<b>25+</b>	 30067891328



## RFID – Importance over all

RFID is a key technology for a lot of different applications and services in the area of healthcare, eCommerce, eMobility and in general Unique Identity! There will be more and more applications, especially regarding near field communication (NFC) and identification !

Thank you very much for your attention!



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