Real Time Systems – SS2016

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Basic Real-Time-Mode
Baggage-Conveyer

Video: Gepäckförderanlage

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See also:

https://www.youtube.com/watch?v=NuYdGlhhHxc

Baggage Conveyer : das „Weichenproblem“

Quelle: Marco Franz, Fraport AG, IUK-AE21

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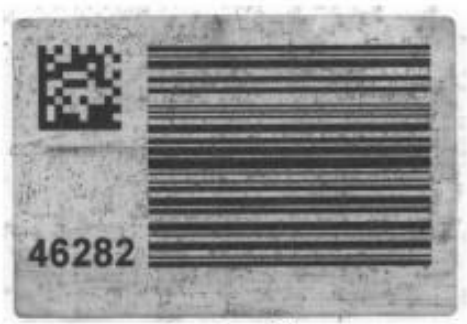
Bar-Code on Tray and Frame

Abbildung 17: sauberer Tag

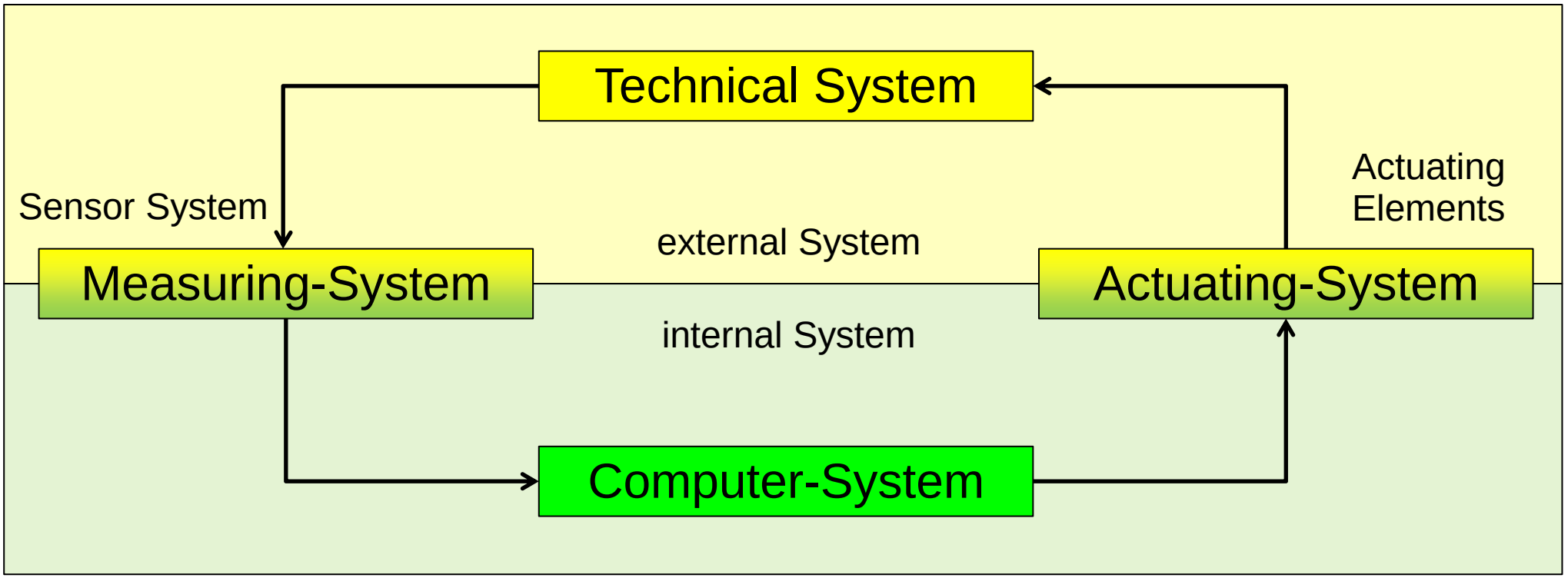


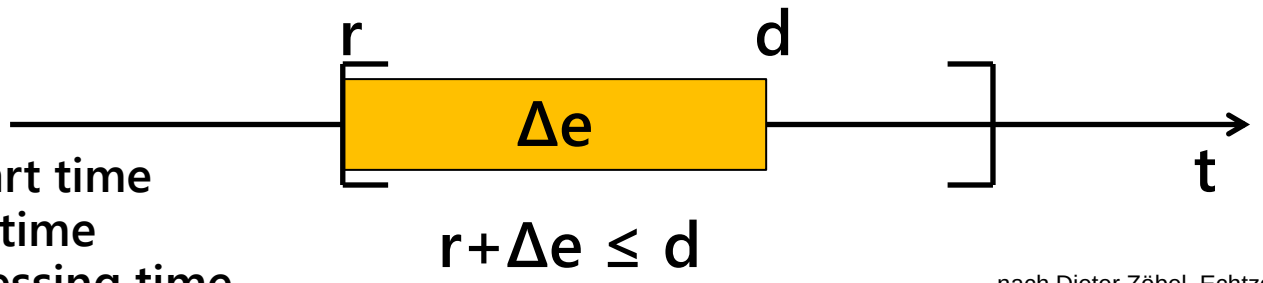
verschmutzer Tag

Quelle: Marco Franz, Fraport AG, IUK-AE21

Basic model for a Real-Time-System

Real-Time-System





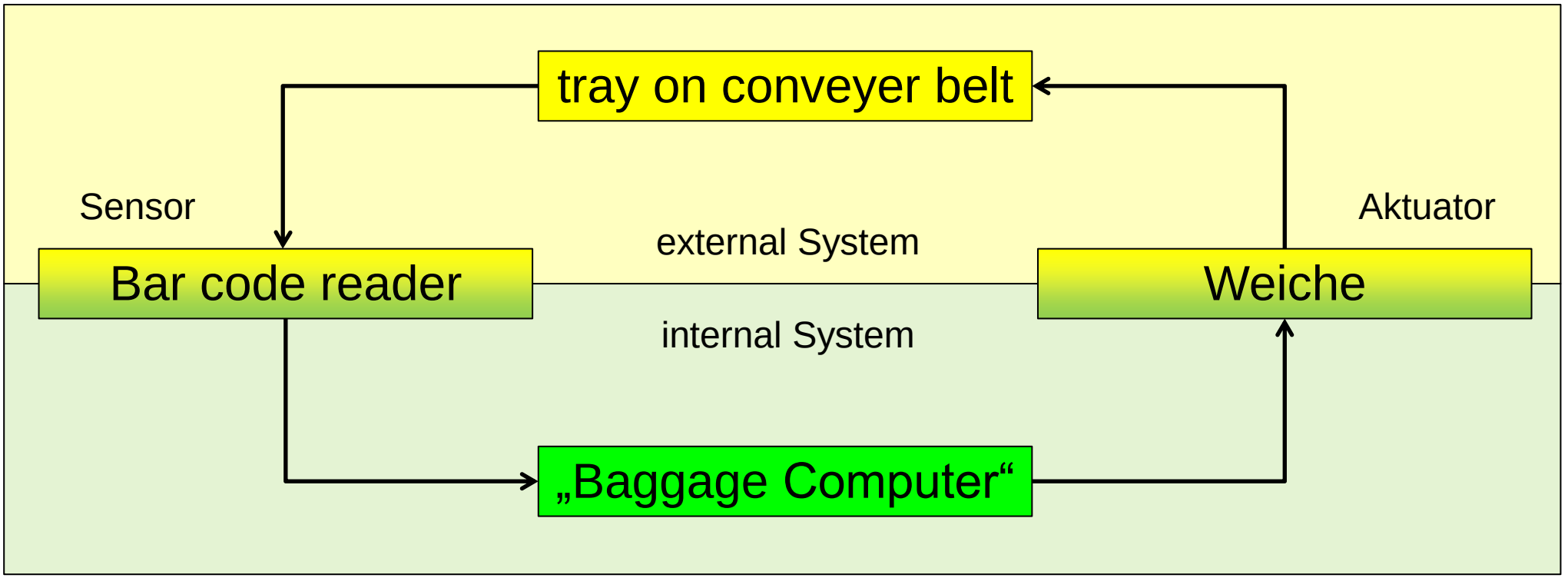
r+Δe ≤ d

r : earliest start time
d : latest end time
Δe : max. processing time

nach Dieter Zöbel, Echtzeitsysteme Grundlagen der Planung, Springer-Verlag Berlin Heidelberg, 2008, ISBN 978-3-540-76395-6

Grundmodell eines Echtzeitsystems

Real-Time-System

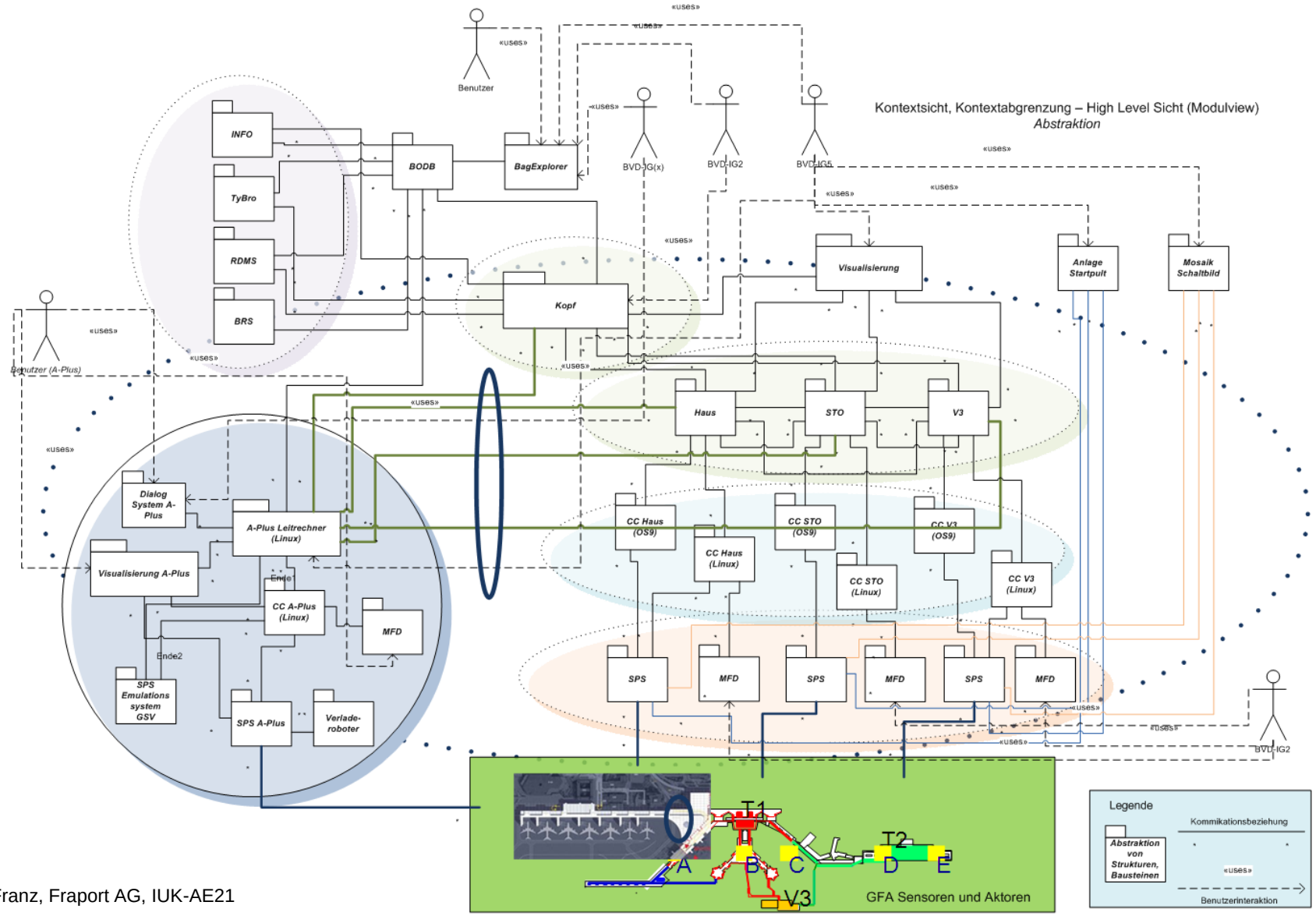


r : receive bar code
d : remaining time for actuator
Δe : max. computing time

$r + \Delta e \leq d$

nach Dieter Zöbel, Echtzeitsysteme Grundlagen der Planung, Springer-Verlag Berlin Heidelberg, 2008, ISBN 978-3-540-76395-6

IT – Component Overview



Quelle: Marco Franz, Fraport AG, IUK-AE21

Conclusion

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You have heard, repeated and learned

important aspects of Real-Time-Systems

You have seen some important core components of

Real-Time-operating Systems

You have recognized the context and you feel:

„Real-Time“ is an exciting future market for computer scientists