RF and mmWave Circuit Design

WIRELESS SYSTEMS – SYSTEM DESIGN

dr. Carlos Mendes, Jr.
prof. dr. ir. Peter Baltus
prof. dr. Marion Matters

Department of Electrical Engineering, Integrated Circuits Group

coursera TU/e

Wireless Systems

Review

- Top-down system design
- Problem definition
- System specifications
- System requirements
- System architecture

coursera TU/e

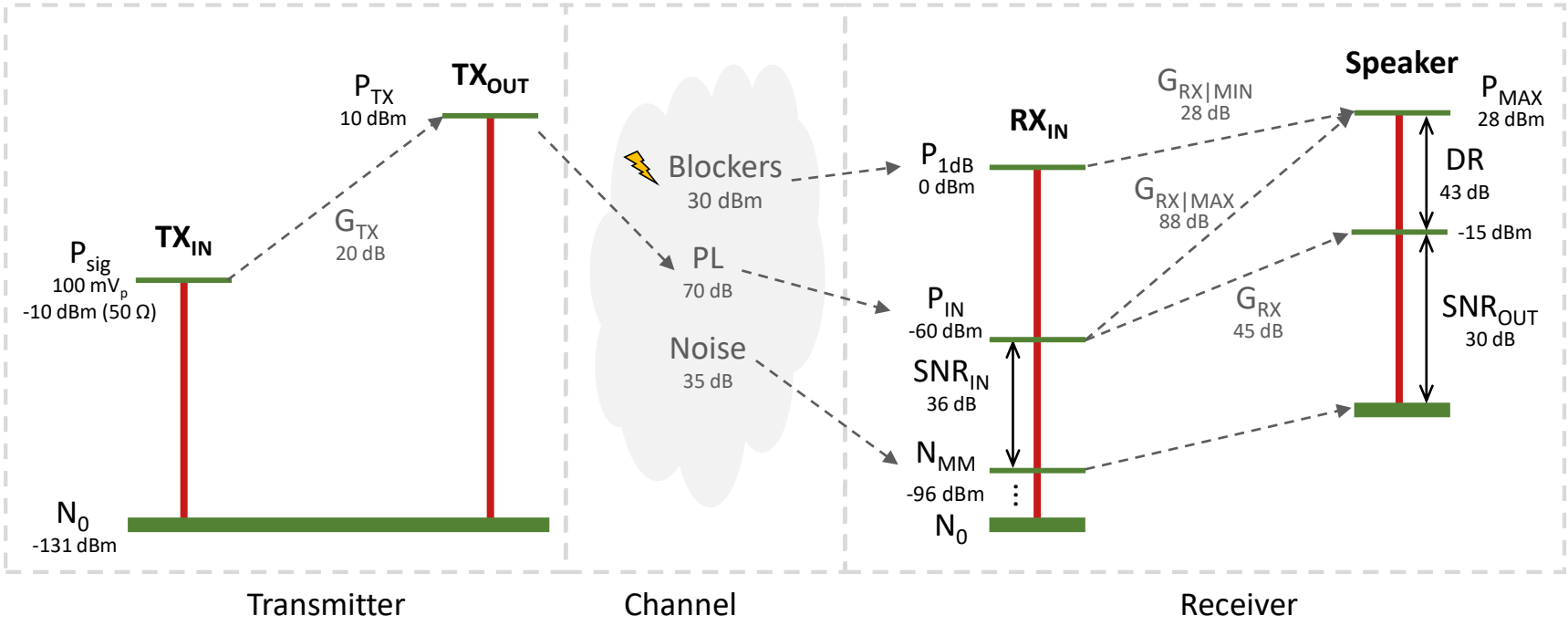
System Architecture

Link Budget – Reference Table

System	Transmitter	Channel	Load	Receiver
Carrier	Input Signal	Interference	Audio Signal	Antenna Gain
Bandwidth	Output Signal	Path Loss	Target Distance	Filter Charact.
Type	Antenna Gain	Noise		
Modulation				

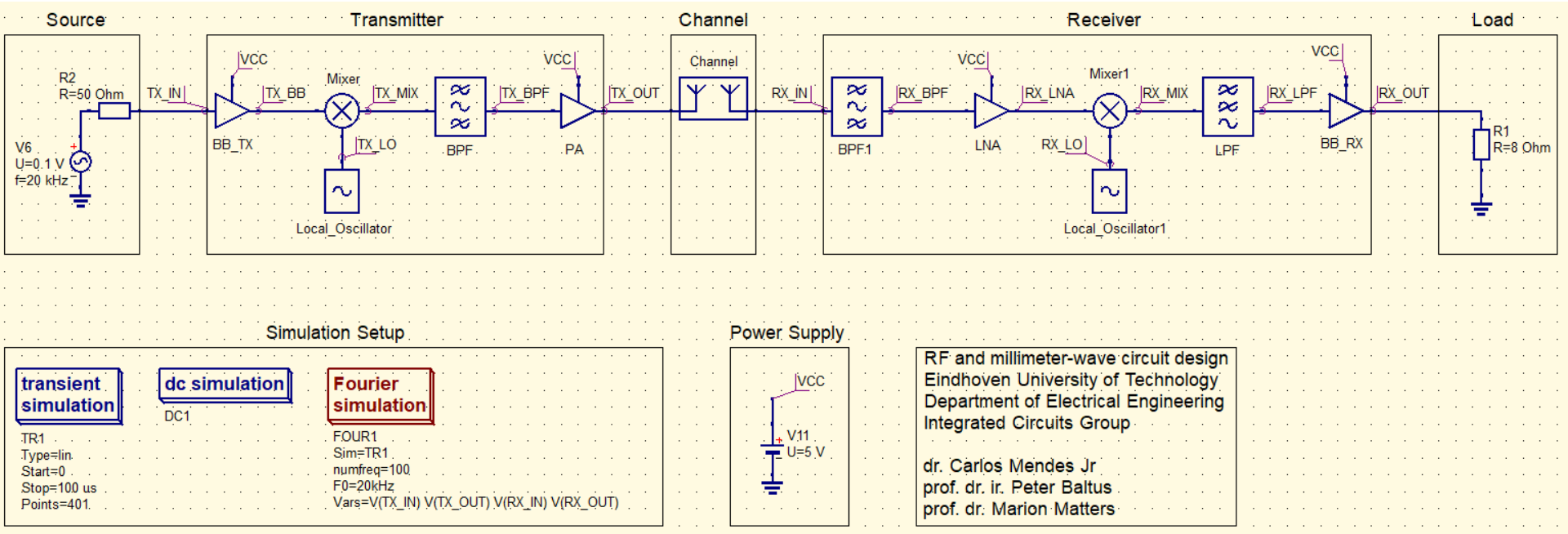
System Architecture

Link Budget – Graphical



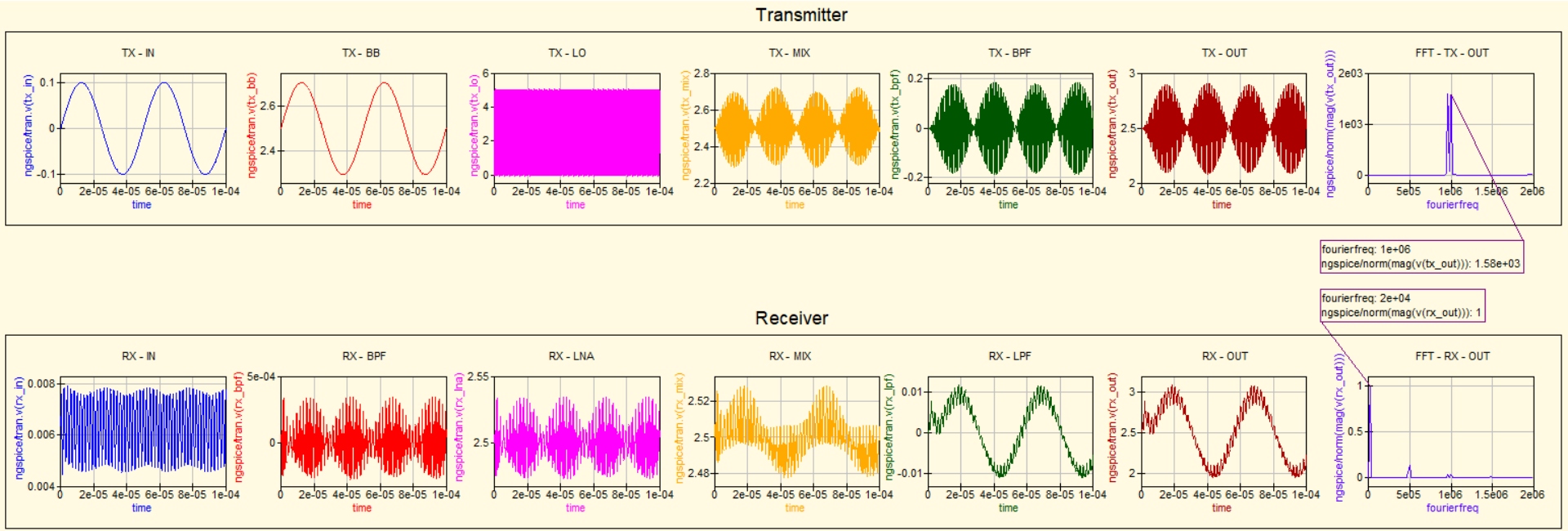
Wireless Tin Can Telephone

Sub-system Architecture

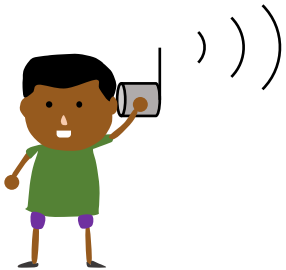


Wireless Tin Can Telephone

Sub-system Requirements



Thanks for watching!



C.A.M.Costa.Junior@tue.nl

P.G.M.Baltus@tue.nl