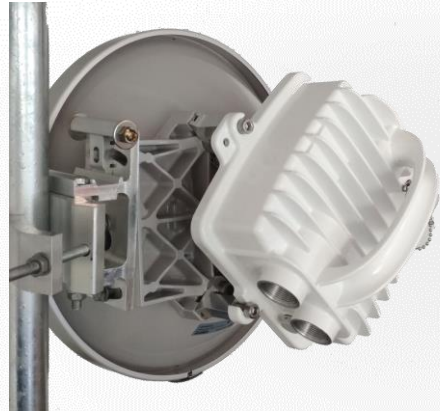


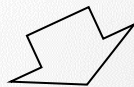
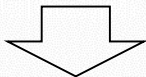
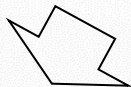
RAY3

Microwave Point-to-Point Link

**Optimální mikrovlna
pro 17 GHz**



Motto pro RACOM:
Technicky dotažený výrobek
Spokojený a produktivní uživatel



Kvalita



RAY2

+

Gigabit FDD
in free-band
100% Flexible
Reliable
Valuable

=



RAY3

(10, 11, 17, 18 a 24 GHz)

(zatím 17 a 24 GHz)

FDD Gigabit + Asymetrie

Gigabit FDD
in free-band
100%
Flexible
Reliable
Valuable

- Kanály až **112 MHz**
- Modulace až **4096 QAM** (pro 1 Gbps stačí 2048 QAM)
- **FDD kapacita až** (ve 200 MHz pásmu):
 - **2x 713 Mbps**
 - **1002 Mbps + 540 Mbps**
- Libovolná **asymetrie** kanálů
 - kombinace všech **12 šířek kanálů** (3,5 – 112 MHz)
 - kombinace všech **10 modulací** (QPSK – 4096 QAM)
 - ACM umí přepnout na **silnější FEC** (QPSK_S)

Co dalšího jsme zlepšili

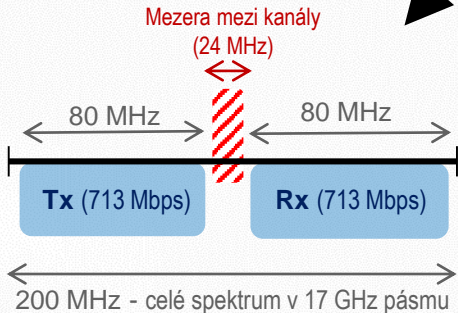
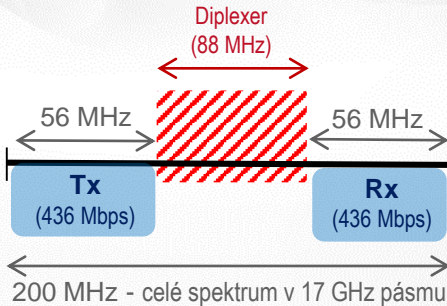
Gigabit FDD
in free-band
100% Flexible
Reliable
Valuable

- Tx výkon **+10 dBm** (na všech modulacích)
- **Spektrální efektivita**
 - 4096 QAM
 - normy pro licenční spoje
=> kanály sousedních RAY těsně vedle sebe
- **Rádiová FLEXIBILITA** (vše SW definováno)
- **Ochrana proti přepětí** (víceúrovňová, robustnější)
- **Rádiová spolehlivost, MTBF >100 let**
- Spotřeba **22 W**, napájení **20-60V** na **DC i PoE** (solar-ready)

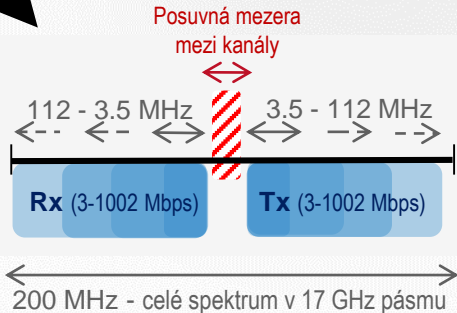


Možnosti využití spektra

Typická 17 GHz mikrovlna s HW diplexerem:

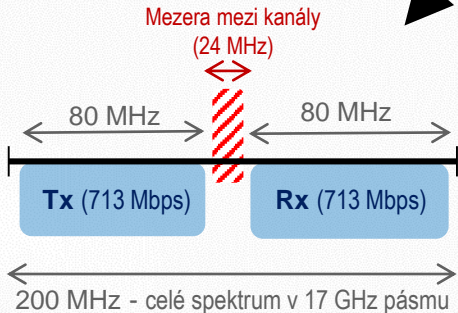
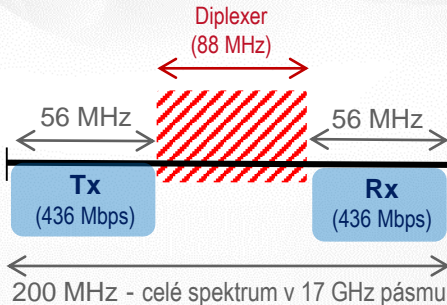


RAY3
Gigabit FDD
in free-band
Flexible
Reliable
Valuable
100%



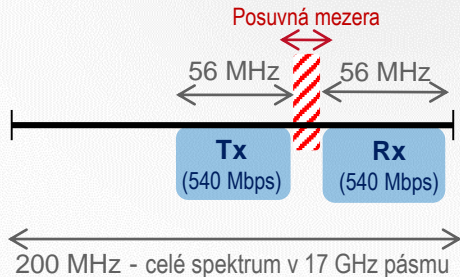
Možnosti využití spektra (1)

Typická 17 GHz mikrovlna s HW diplexerem:



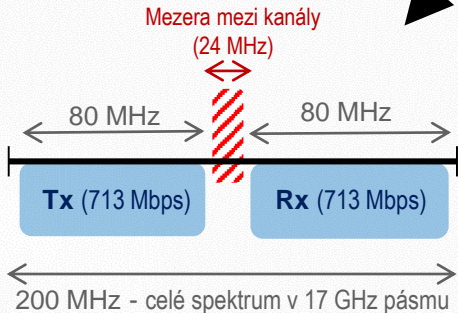
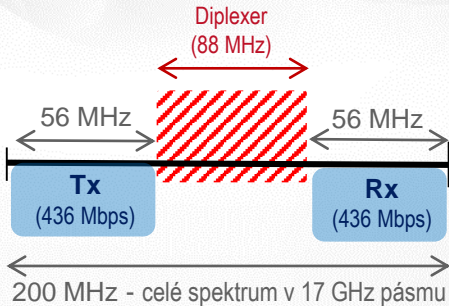
RAY3

Gigabit FDD
in free-band
Flexible
Reliable
Valuable
100%



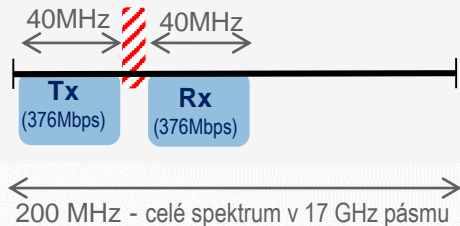
Možnosti využití spektra (2)

Typická 17 GHz mikrovlna
s HW diplexerem:



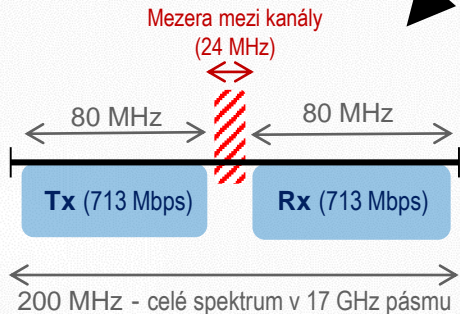
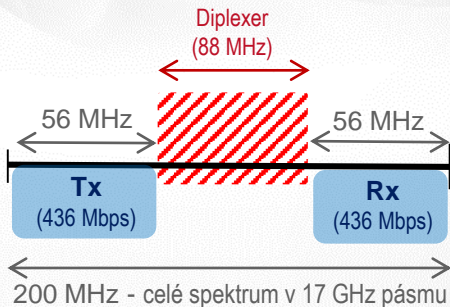
RAY3

Gigabit FDD
in free-band
Flexible
Reliable
Valuable
100%

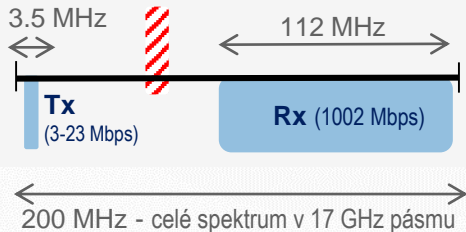


Možnosti využití spektra (3)

Typická 17 GHz mikrovlna
s HW diplexerem:

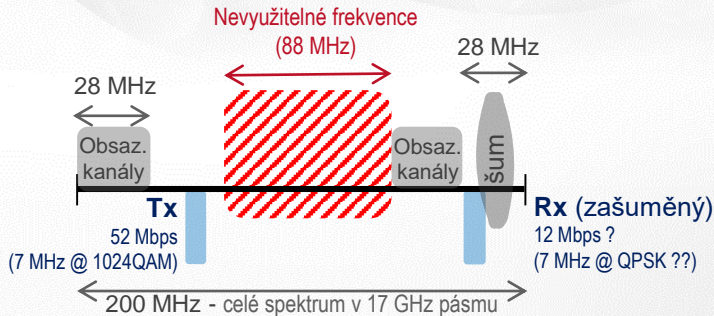


RAY3
Gigabit FDD
in free-band
Flexible
Reliable
Valuable
100%



Situace v terénu

Typická 17 GHz mikrovlna s HW diplexerem:



28 MHz

Obsaz. kanály

Tx - 1002 Mbps
(112 MHz)

Obsaz. kanály

Rx
33 Mbps
(5 MHz)

RAY3

Gigabit FDD
in free-band
100%
Flexible
Reliable
Valuable

Tx3
78 Mbps
(10 MHz)

Obsaz. kanály

Tx1
713 Mbps
(80 MHz)

Tx2
185 Mbps
(20 MHz)

Obsaz. kanály

Rx3
33 Mbps
(5 MHz)

Rx1
33 Mbps
(5 MHz)

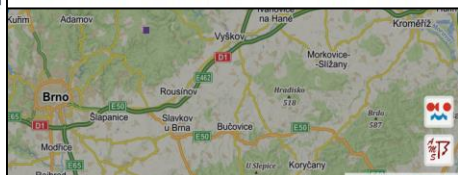
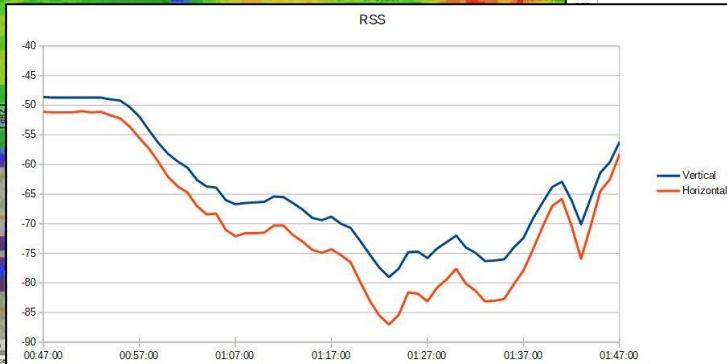
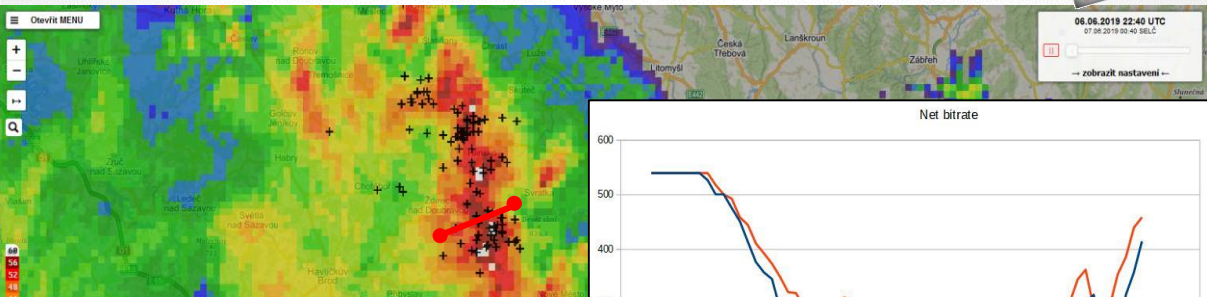
Rx2
23 Mbps
(3.5 MHz)

200 MHz - celé spektrum v 17 GHz pásmu

200 MHz - celé spektrum v 17 GHz pásmu

Praktické zkušenosti s RAY3

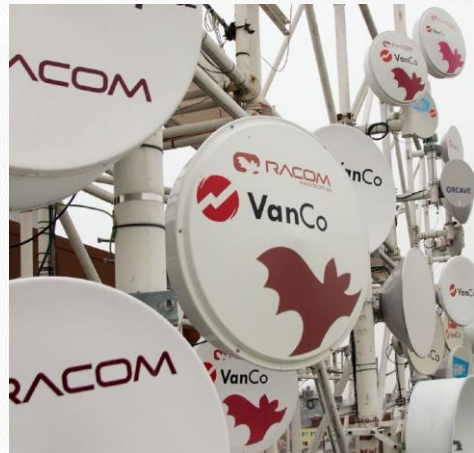
Gigabit FDD
in free-band
100% Flexible
Reliable
Valuable



Suma sumárum: 100% HODNOTA

Gigabit FDD
in free-band
Flexible
Reliable
Valuable
100%

- ✓ Plný FDD, GIGABIT
- ✓ Maximální FLEXIBILITA
- ✓ Vynikající SPOLEHLIVOST
- ✓ Optimální MIX vlastností
- ✓ Spolehlivý dodavatel (VanCo)



RAY3