

Inductorless RF Design

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Inductors are expensive

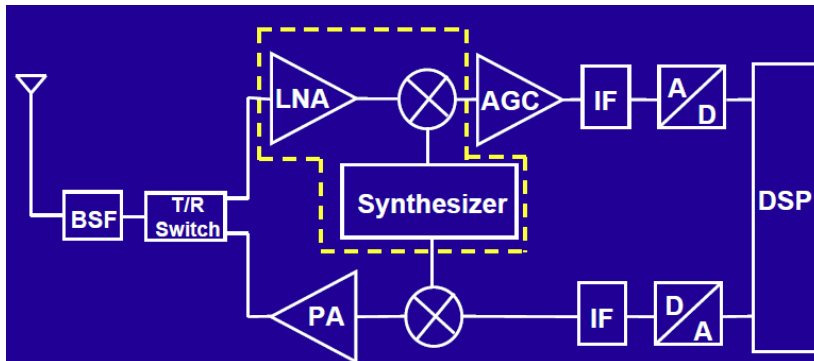
- Take up a lot of area
- Do not port well from process

Modern processes are high F_T s

- Can accommodate low pass designs even at RF

More compact, can implement multiple radios on chip

- Cellular, Bluetooth, WiFi, WiMax, FM

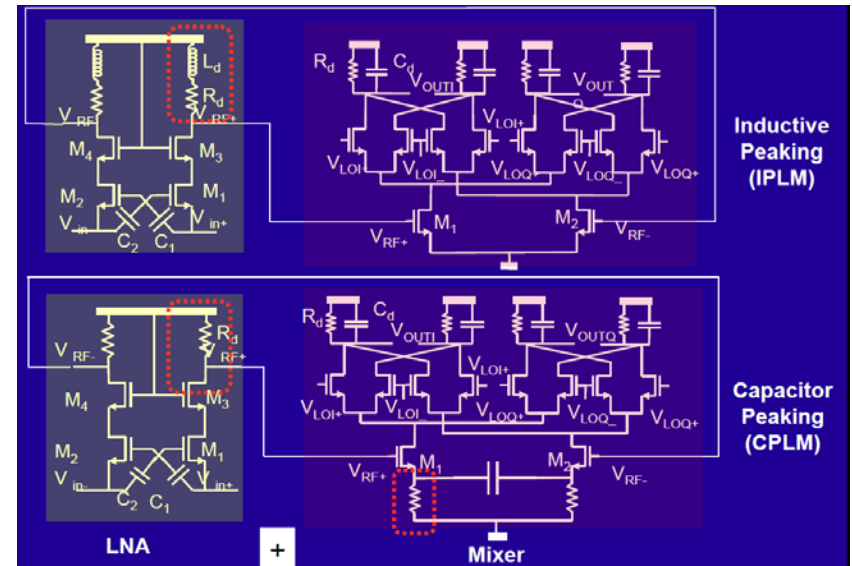


Traditional design methodology

- Design each block separately and match I/O impedances

New design methodology

- Co-design: think of them together



Liuchun Cai & Ramesh Harjani, "1-10GHz Inductorless Receiver in 0.13 μ m CMOS", RFIC 2009 (nominated for best paper award)