

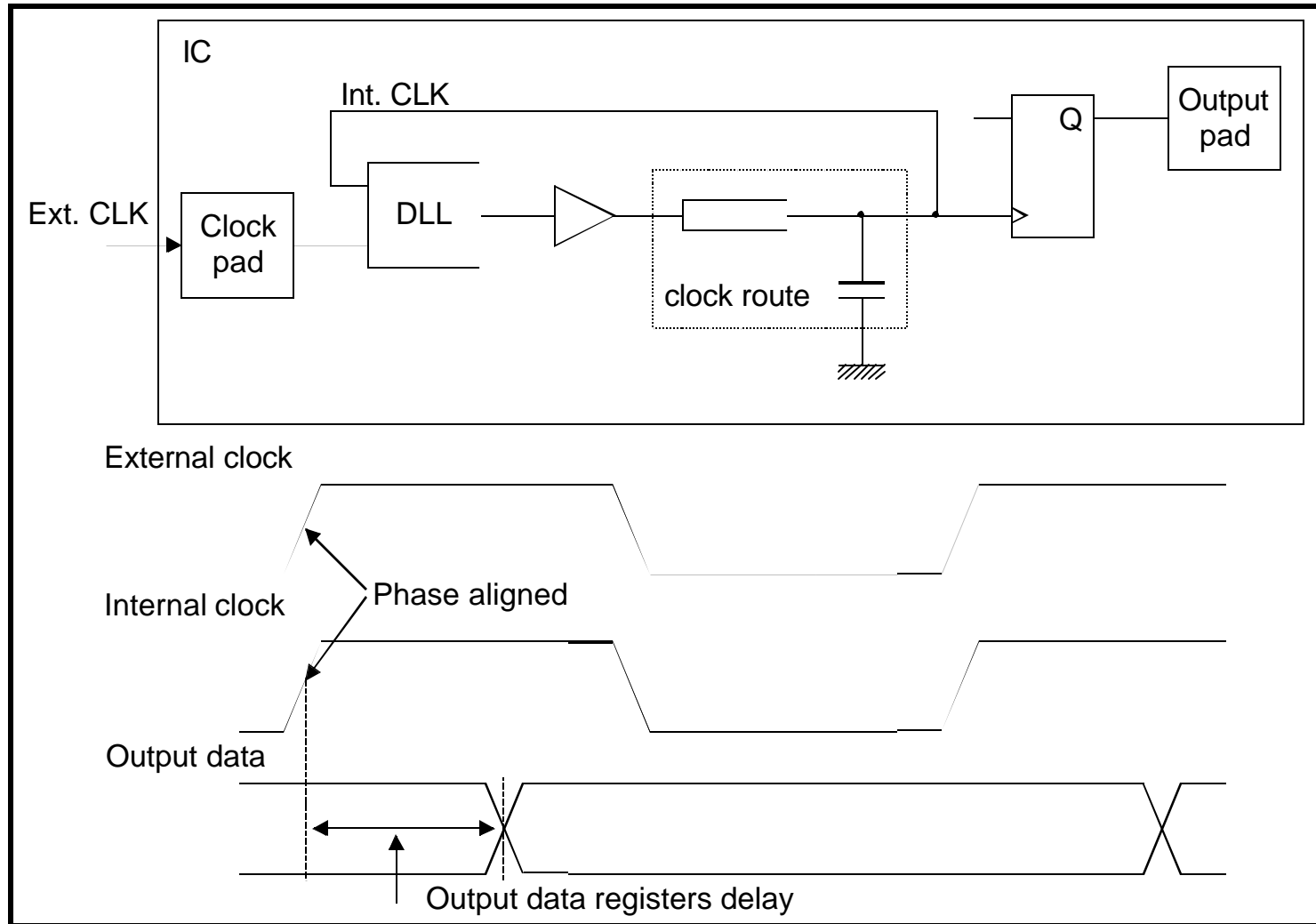
“A brief Introduction”

- Introduction – *“Is there a limit?”*
- Transistors – *“CMOS building blocks”*
- Parasitics I – *“The [un]desirables”*
- Parasitics II – *“Building a full MOS model”*
- The CMOS inverter – *“A masterpiece”*
- Technology scaling – *“Smaller, Faster and Cooler”*
- Technology – *“Building an inverter”*
- Gates I – *“Just like LEGO”*
- The pass gate – *“An useful complement”*
- Gates II – *“A portfolio”*
- Sequential circuits – *“Time also counts!”*
- **DLLs and PLLs – “A brief introduction”**
- Storage elements – *“A bit in memory”*

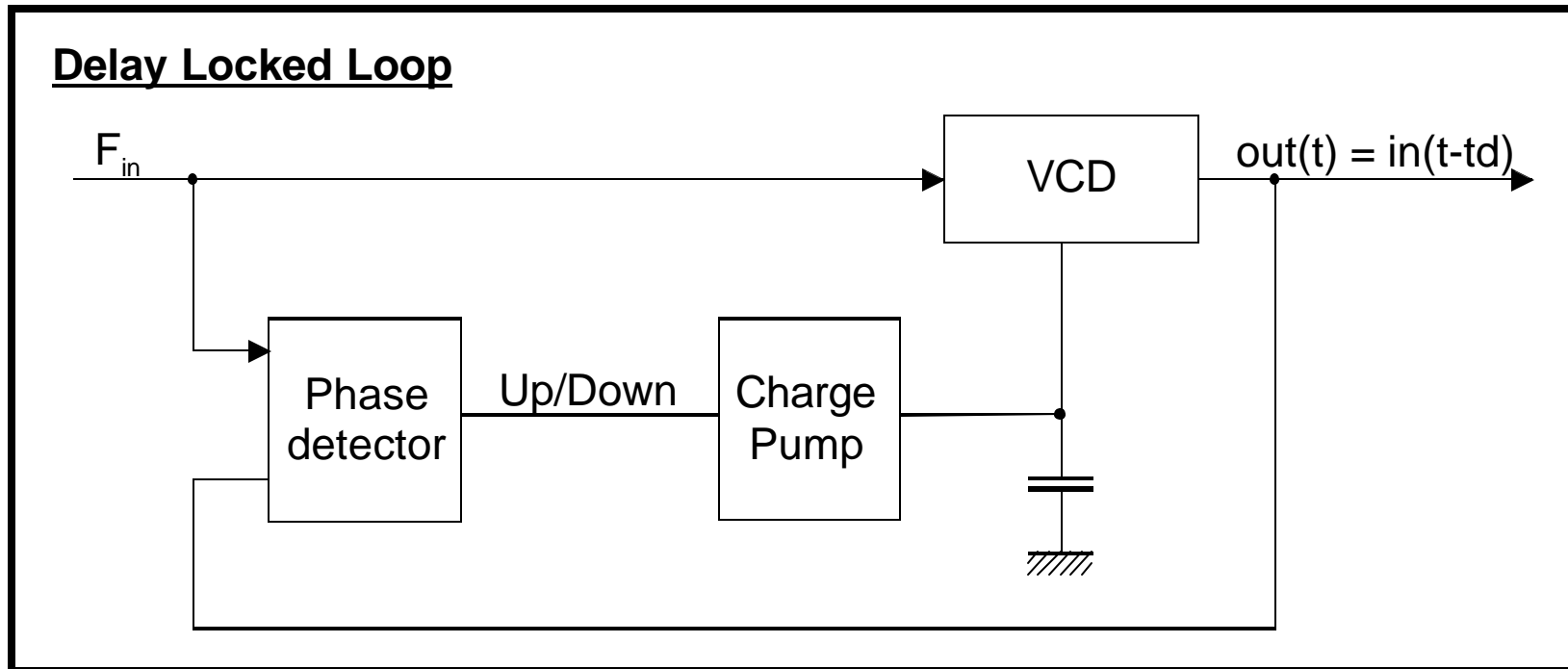
“A brief introduction”

- Delay-Locked Loop (DLL)
- Phase-Locked Loop (PLL)

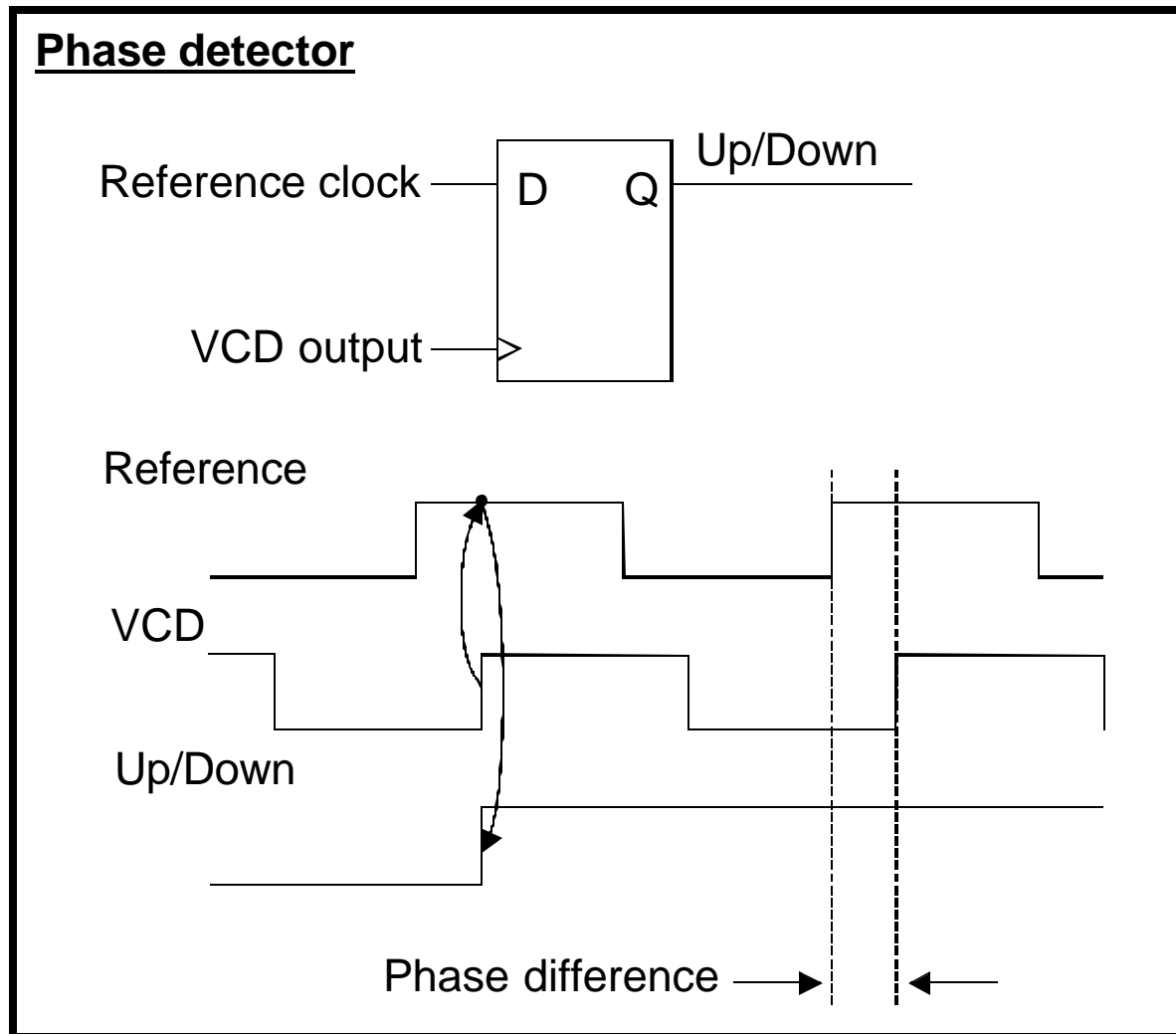
Delay locked loops



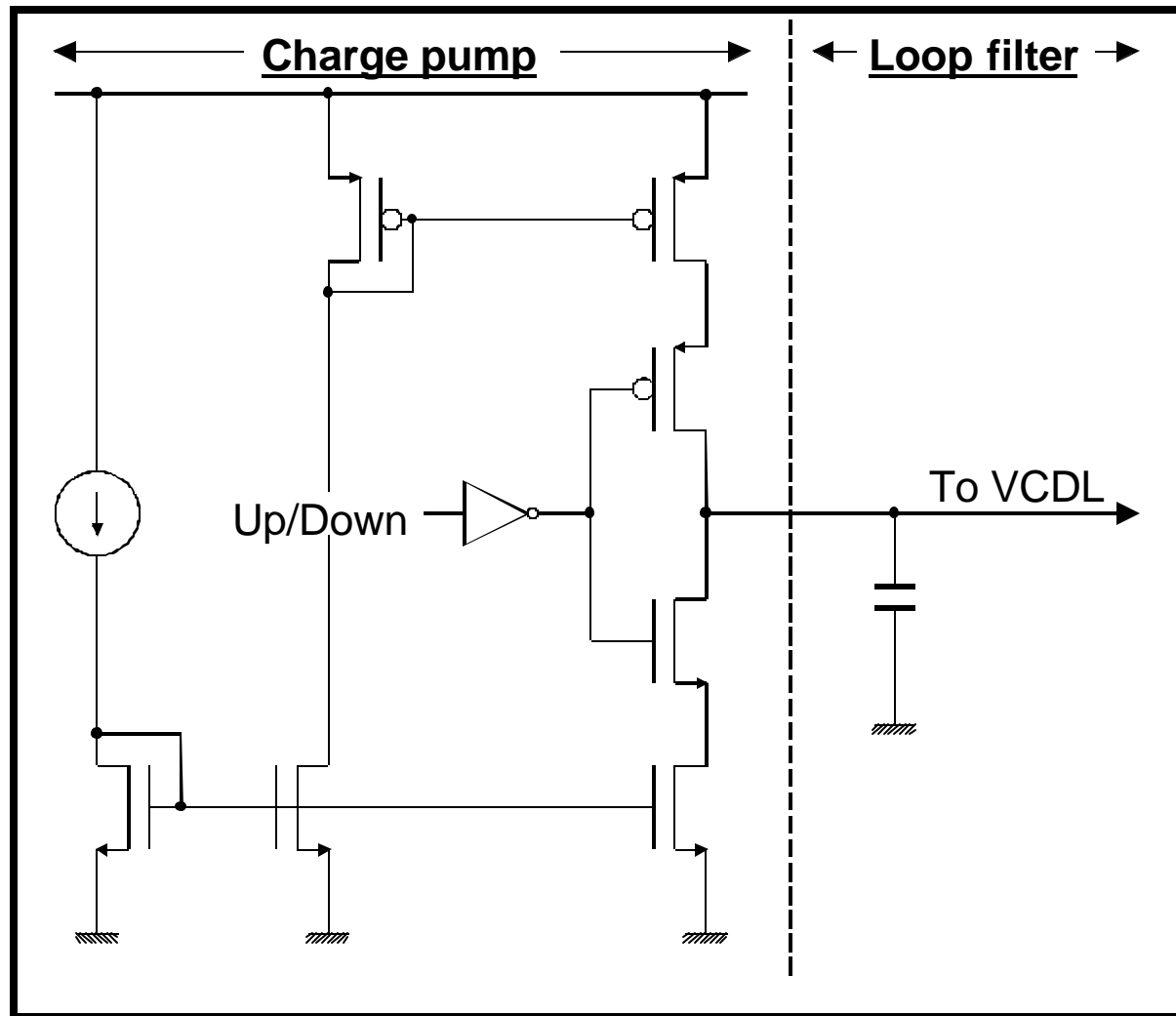
Delay locked loops



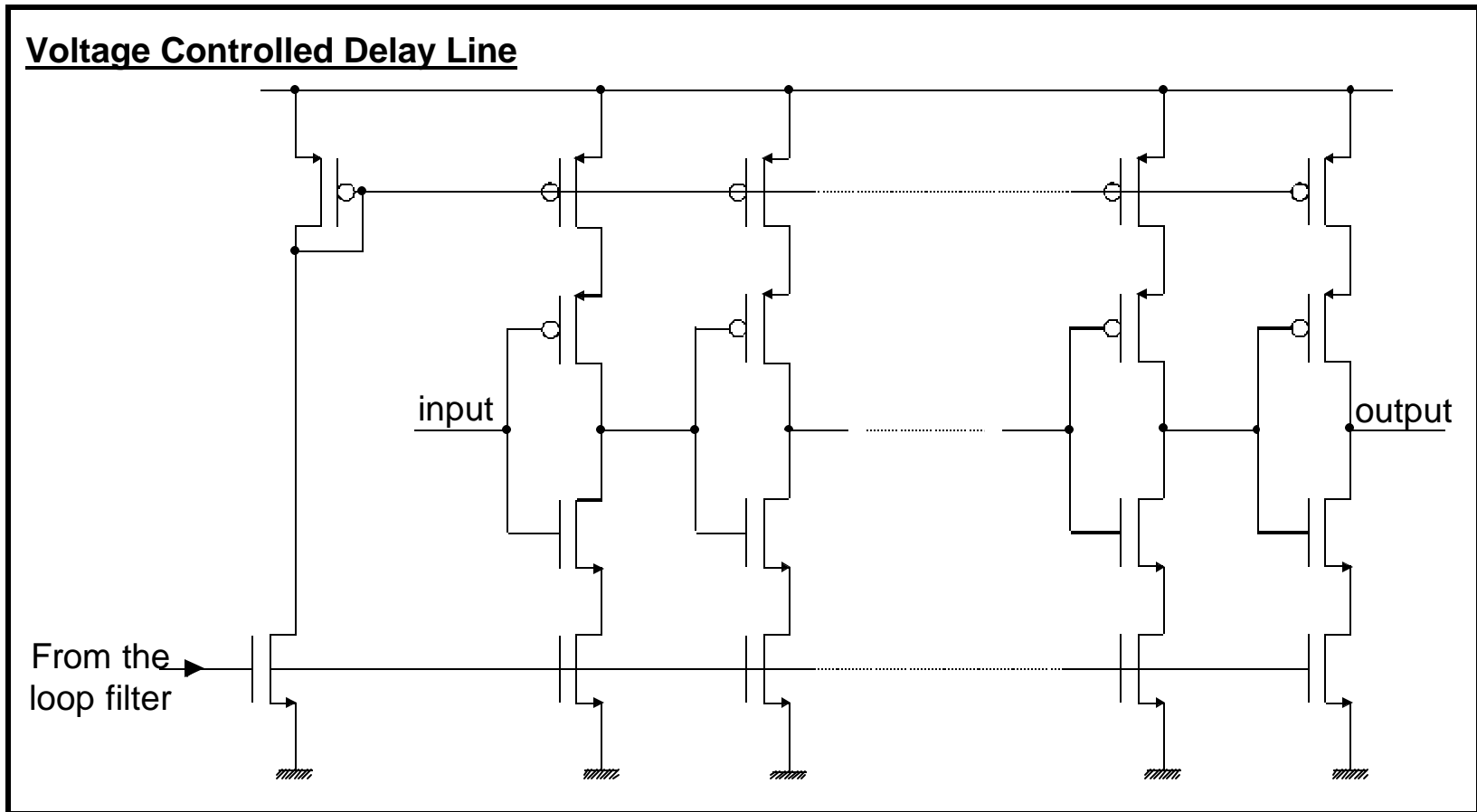
Delay locked loops



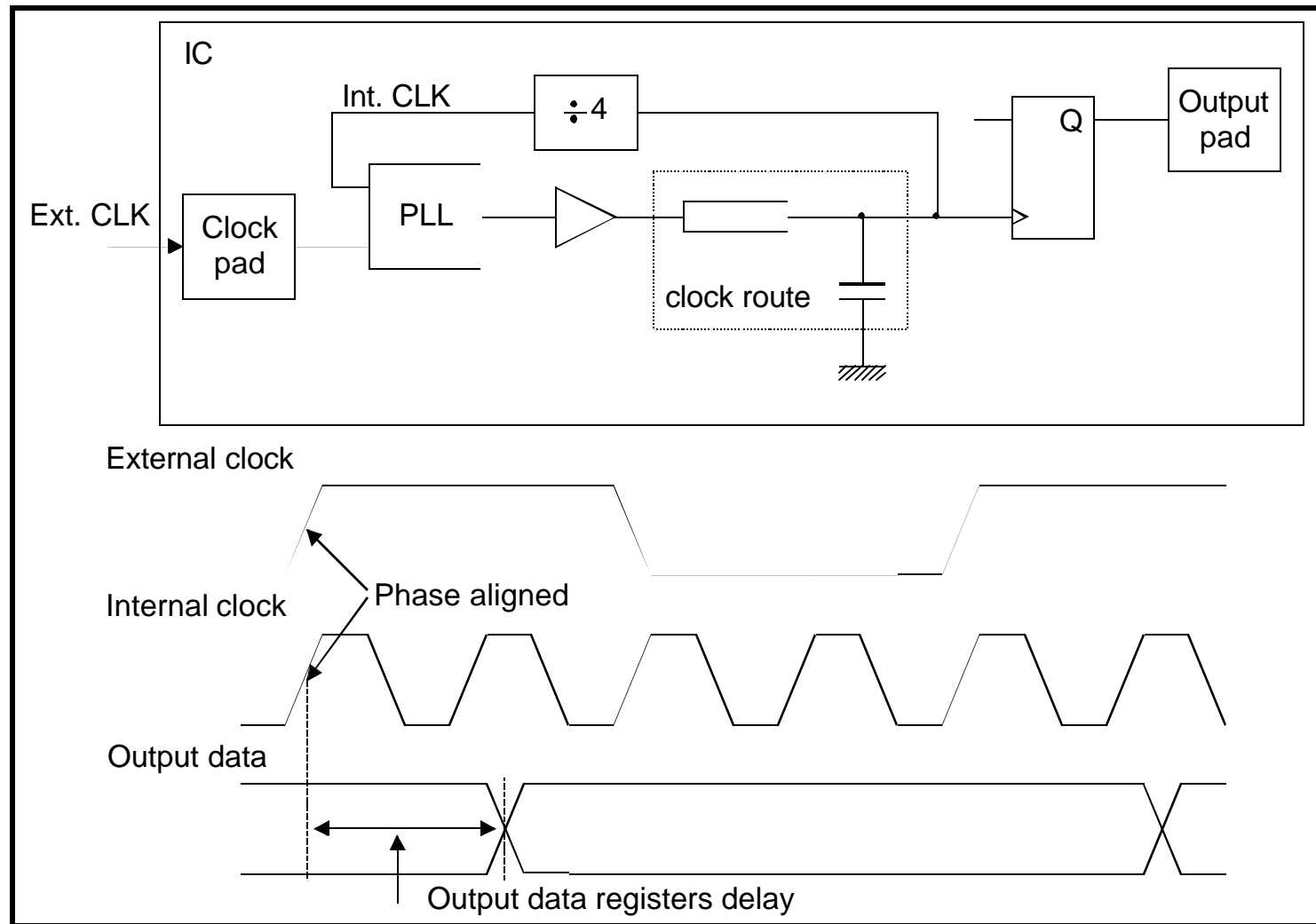
Delay locked loops



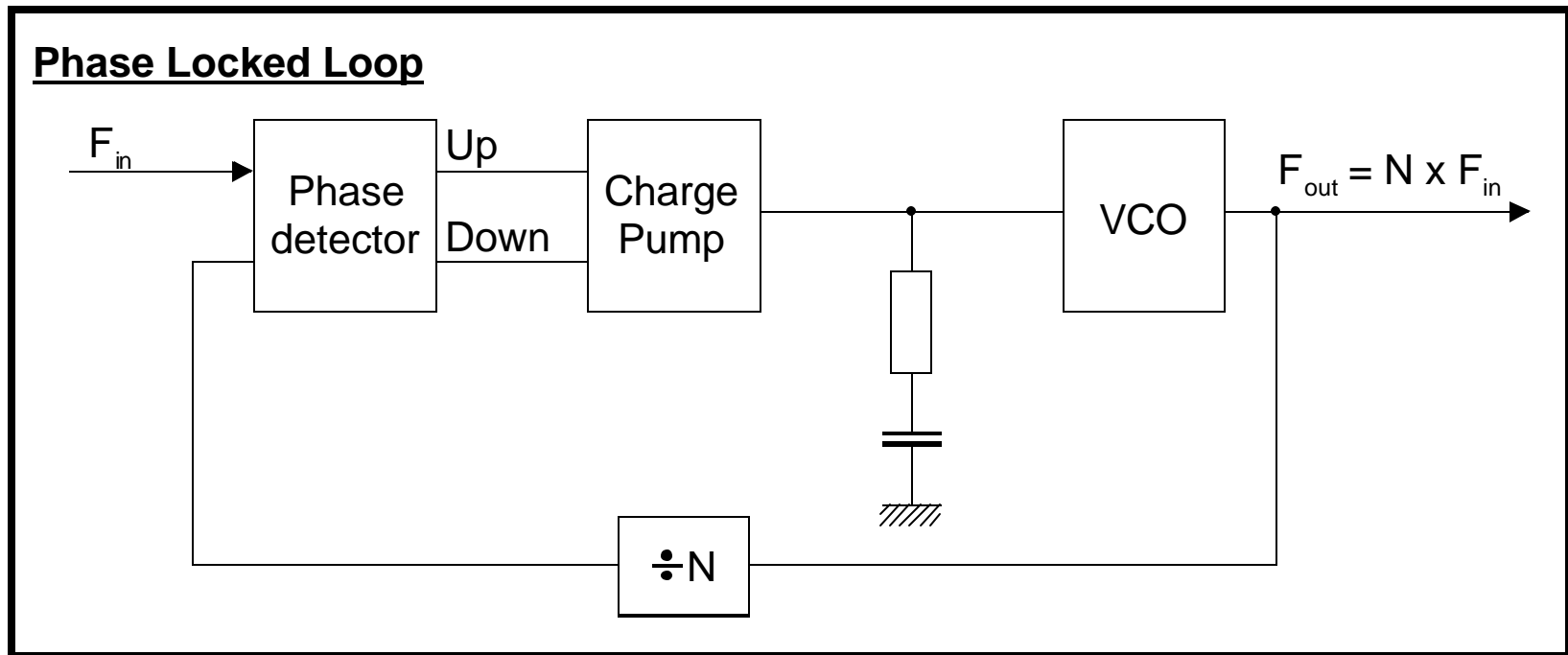
Delay locked loops



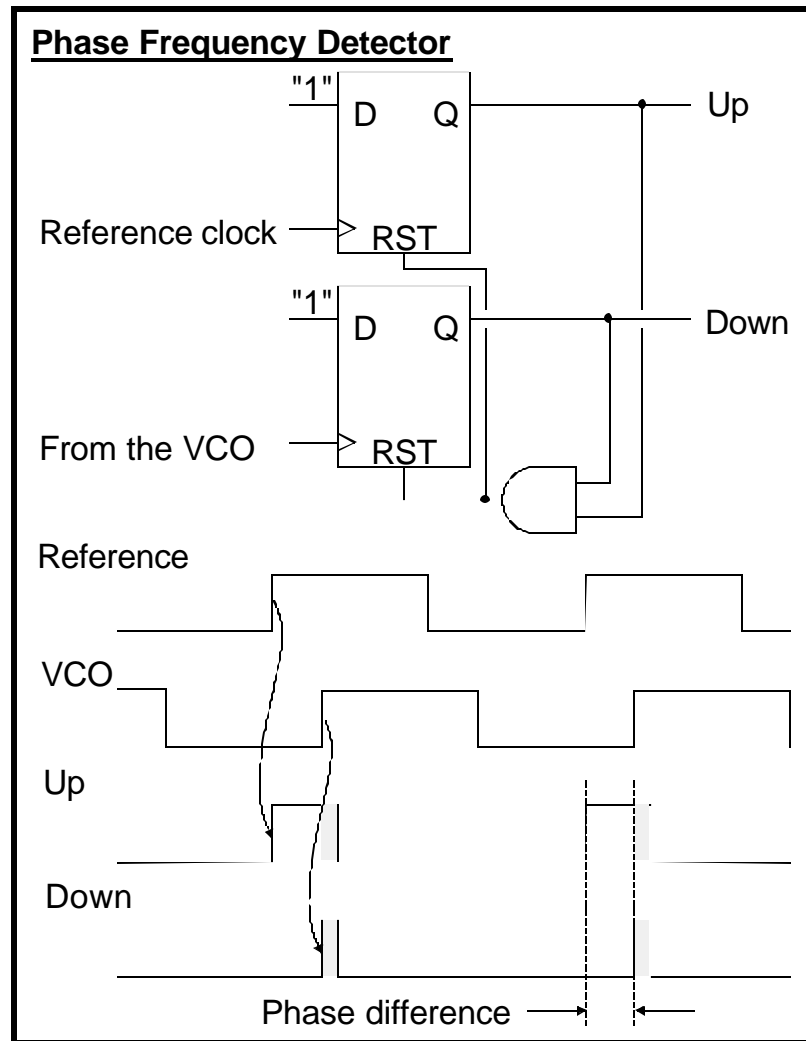
Phase Locked Loops



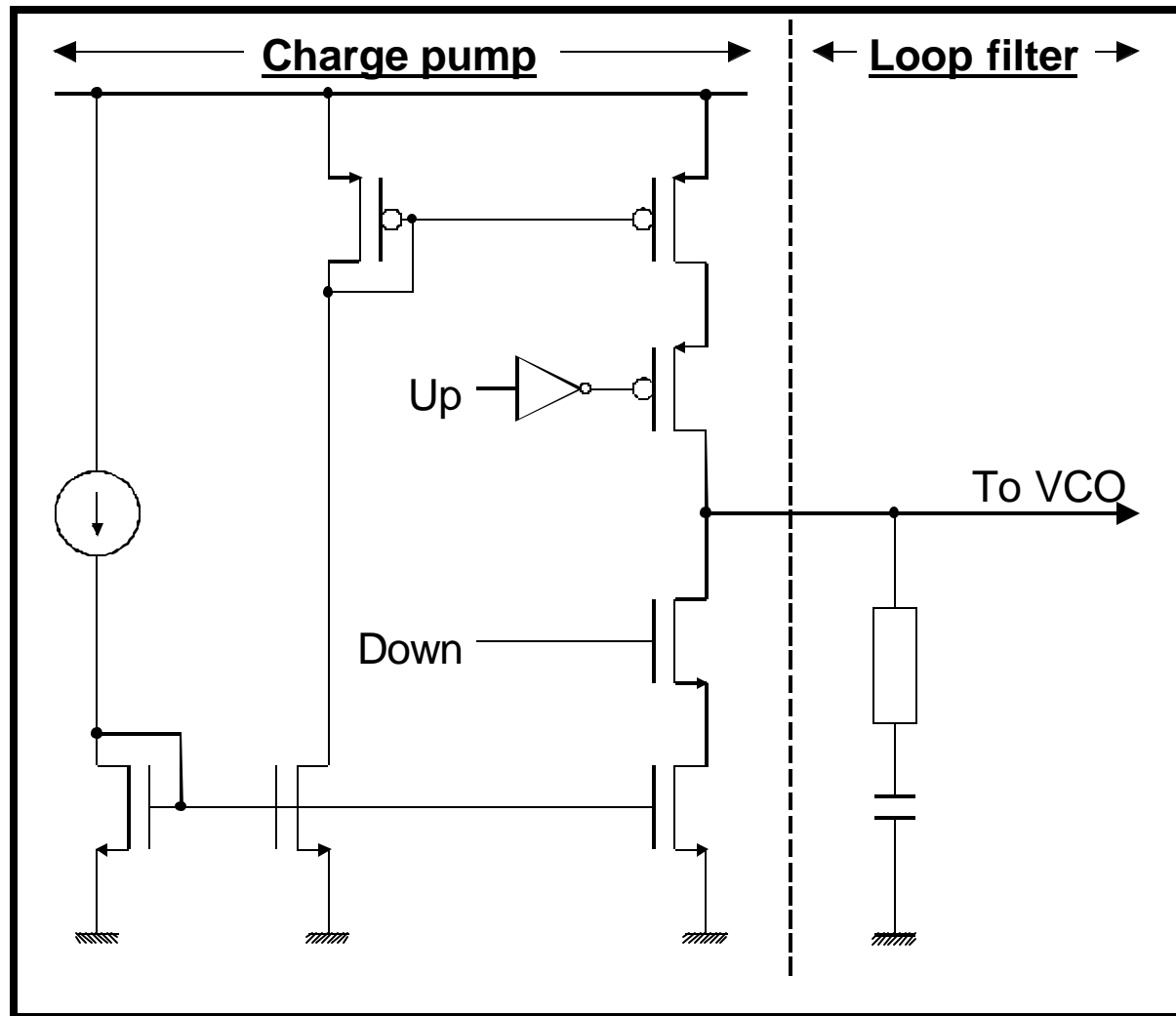
Phase locked loops



Phase locked loops



Phase locked loops



Phase locked loops

