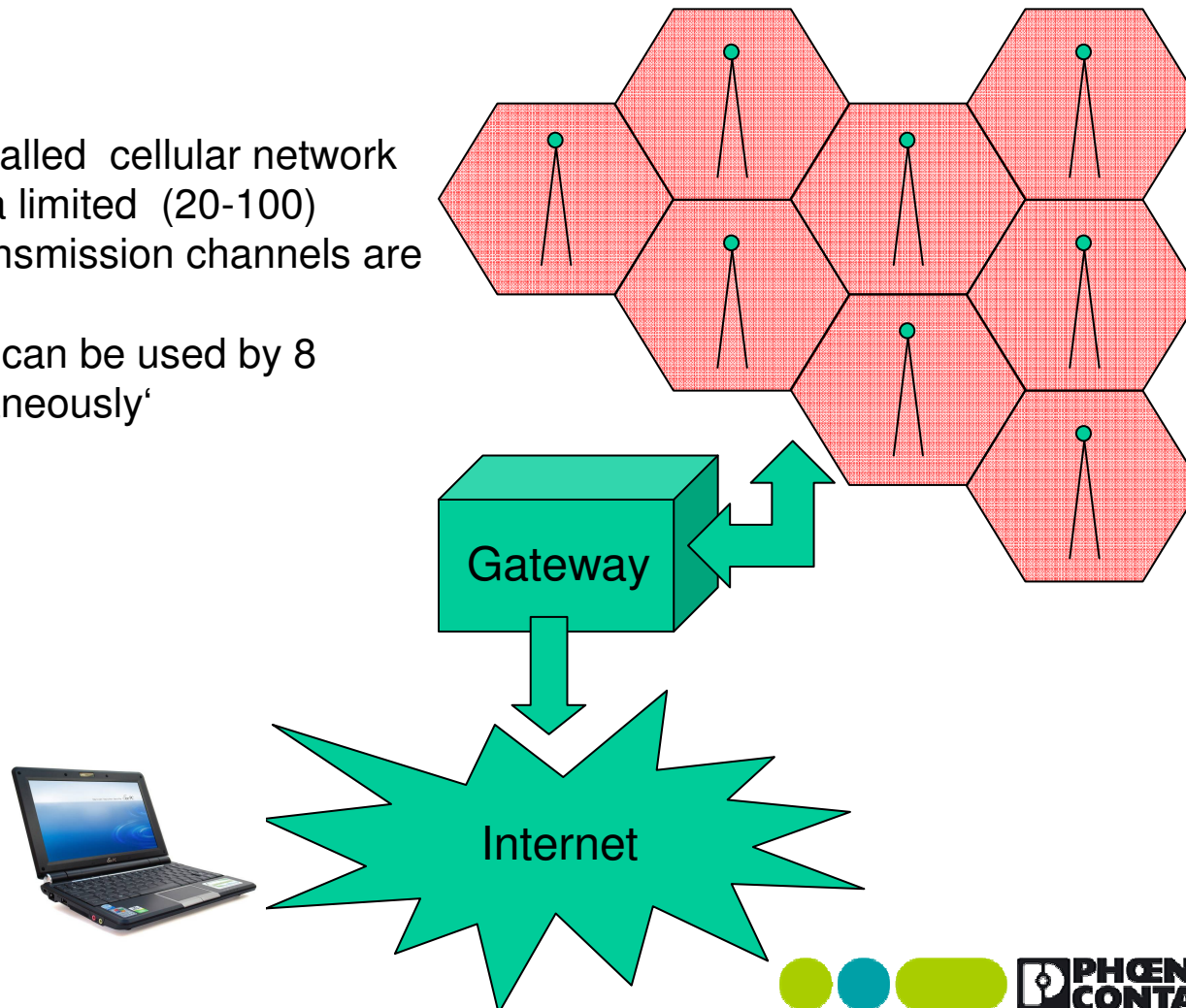


Basics GSM network and possible restrictions



The GSM network and its restrictions

- GSM is a so-called cellular network
- In every cell, a limited (20-100) number of transmission channels are available
- Each channel can be used by 8 devices ,simultaneously‘



The GSM network and its restrictions

Theoretically obtainable data rates

GSM (9,6kBit/s = ~1kByte/s max.)

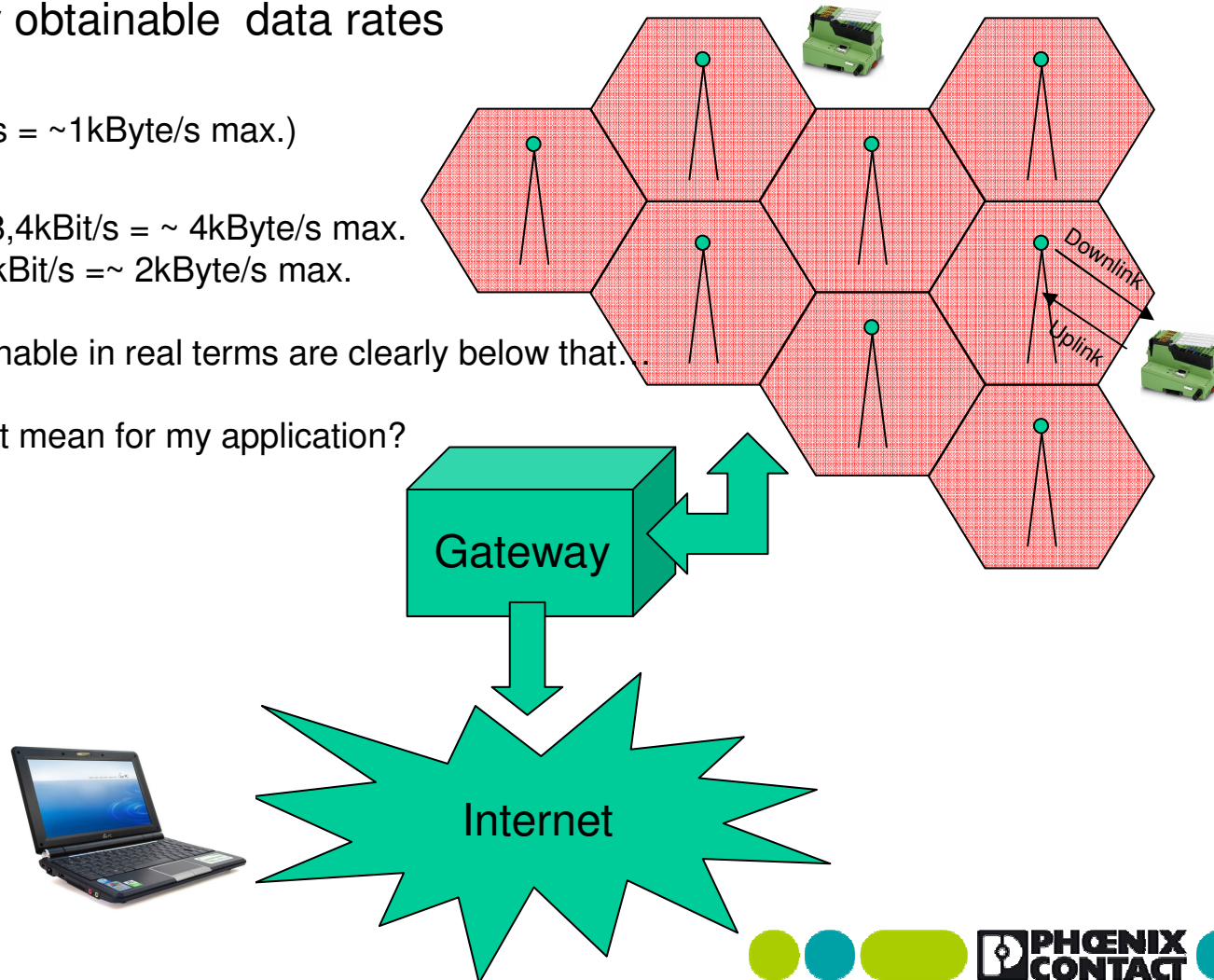
GPRS

Downlink: 38,4kBit/s = ~ 4kByte/s max.

Uplink: 19,2kBit/s = ~ 2kByte/s max.

Data rates obtainable in real terms are clearly below that...

...what does that mean for my application?



The GSM network and its restrictions

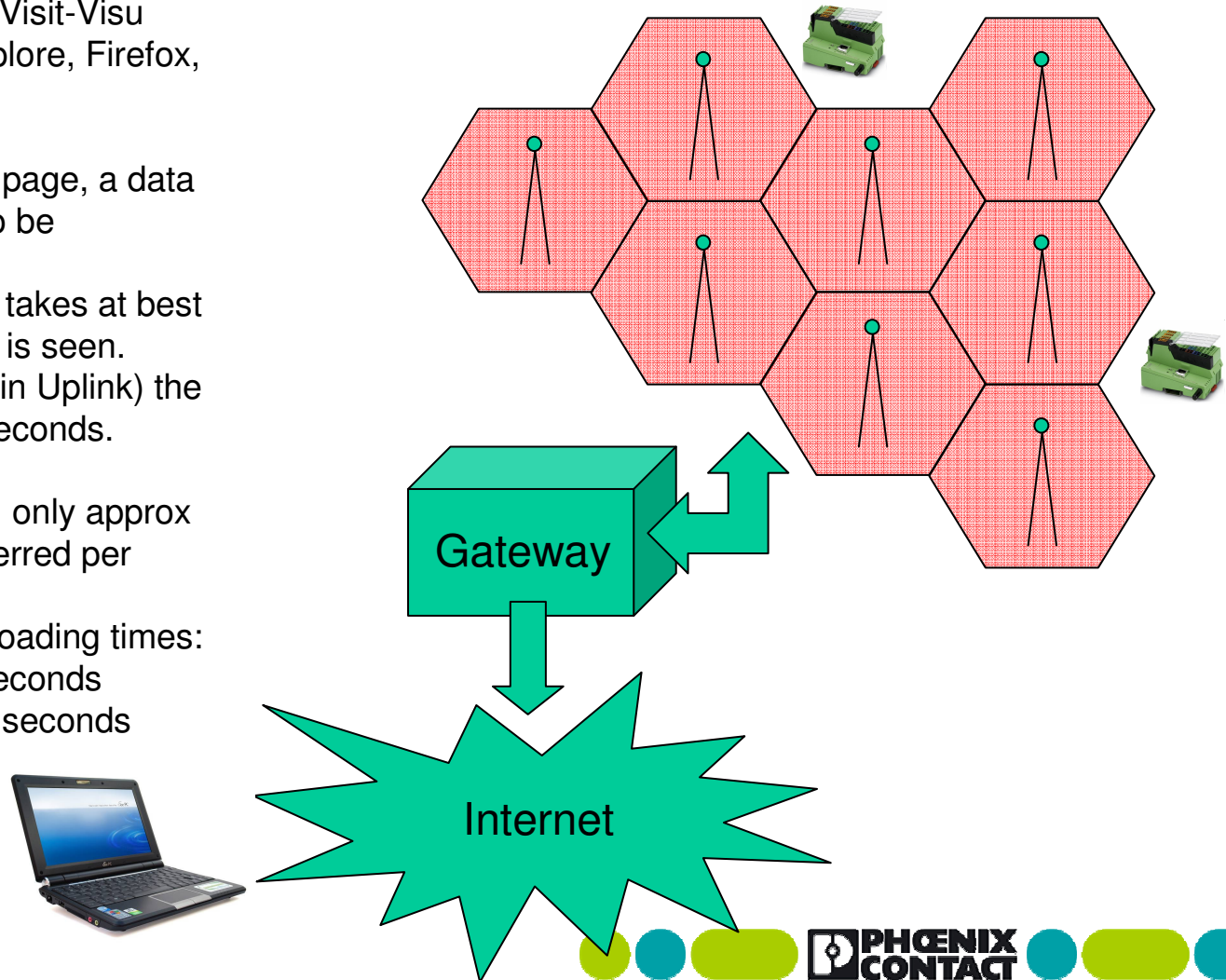
Let's assume: Open a WebVisit-Visu with standard browser (iExplore, Firefox, etc..)

For displaying the first web page, a data volume of 256kBytes has to be transferred

- Via GSM with 1kByte /s it takes at best 256 seconds until a display is seen.
- Via GPRS with 2kByte/s (in Uplink) the loading takes at best 131 seconds.

By using the MicroBrowser, only approx 15kBytes have to be transferred per page.

This leads to the following loading times:
 GSM with 1kByte/s -> 15 seconds
 GPRS with 2kByte/s -> 7,5 seconds



The GSM network and its restrictions

If the settings are correct, why can't I reach the control?

- Most network operators do not allow access from the outside (via GPRS).
- This service (eg CDA with Vodafone) has to be bought where necessary and paid for in addition.
- I.e., remote maintenance (via GPRS) is only possible if I concluded the appropriate mobile phone contract and bought additional services.

