CLOUD ROBOTICS IS THE MOST LIKELY KILLER APP FOR 5G

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Bell Labs Fellow
Chairman, Strategic Advisory Board, CloudMinds
Founder, Association of Cloud Robot Operators (ACRO)
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and not a “science fiction guy”
A world filled with robots capable of human-like skills is just around the corner.

Cloud Robots are machines that . . .
- do things we don’t want to
- do some things better than we can
- add skills like smartphones download apps
- learn from the experiences of other cloud-connected robots

The term “Cloud Robotics” was coined in 2010 by James Kuffner
Associate Professor, Carnegie Mellon University
CEO, Toyota Research Institute - Advanced Development (TRI-AD)
In Human vs. Machine:

Your Brain . . .
- weighs ~3.5 pounds
- runs on ~40 watts.

Equivalent in Silicon . . .*
- ~2,000 tons!
- ~running on 40,000,000 watts!

Physics forces a cloud-based architecture
- the weight & energy can’t be with the robot body
- likewise for other factors (i.e. size, heat dissipation)

5G provides the bandwidth & speed
- fastest part of human brain deals with vision
- networks achieve benchmark with 4K & 8K

*Observations of Bill Huang, Founder, CloudMinds
from “Robots with their Heads in the Clouds”
Scientific American, August 2, 2017
Cloud Robot bandwidth demand will exceed that of humans for 5G and beyond

- multiple vision streams of data
- online and working 24 x 7 x 365 - *while we sleep!*
- bi-directional learning interface with the cloud brain

Owners will highly value their Cloud Robot

- valuation comparable to multiple unskilled and skilled laborers

maid

chef

nurse

guard

hostess

nanny

secretary

concierge

gatekeeper

The economics of cloud-connected robot services will drive future mobile network design and operations

Of course all this could be wishful thinking; but when you chat with bots, see self-driving cars... Kind of makes you wonder... doesn't it ?!