Activities on Stratospheric Platform

SoftBank Corp.

September, 2019



Disclaimer

This presentation material is made based on information available at the time of writing. Plans, forecasts, strategies, and other forward-looking statements in this presentation are not historical facts, and include elements of risk and uncertainty. Actual results may therefore differ materially from these forward-looking statements due to changes in the business environment and other factors.

Technology development



Current area coverage methods



Picocell (indoor BS)

Microcell (hotspot BS) Macrocell (rooftop BS) Wider Macrocell (tower BS)

New area coverage method needed



Require mobile direct communication solution



Usage Scenarios



Coverage Enhancement



Safety and Security

"Towards 5G era"



loT



Drones

Mobile Communication Anytime, Anywhere

Covering image



Altitude: 1000 km~



Providing coverage in areas where no current terrestrial solution

Covering image

Supplemental method for incumbent MNOs

which might be provided through the stratospheric platform operator

Covered area w/terrestrial infrastructure

Underserved area w/terrestrial infrastructure

Covered area w/stratospheric platform

Providing coverage in areas where no current terrestrial solutions

Agenda Item 10 New Agenda Item for WRC-23 on HIBS (High Altitude IMT Base Stations)

Frequency Usage



Fixed or Mobile Satellite Service



Feeder Link (Backhaul)

Service Link

Mobile Service

Fixed Service

Frequency bands available for Service-Link



Aiming at expansion of available frequency bands *Flexibility in use



New agenda item proposal for WRC-23

Difference from AI 1.14

"AI1.14 HAPS"

Identification of new frequency band

for Fixed service usage

"AI10 HIBS"

Authorization of new usage in *existing* IMT frequency band for Mobile service usage

Status of HIBS proposal in each region



Asia-Pacific: Japan proposed in APG19-3 (Mar. 2018) → APT adopted HIBS proposal as "PACP" in APG19-5 (Jul/Aug. 2019)



<u>Americas:</u> Brazil proposed in 34th CITEL PCC2 (Aug. 2019) → CITEL adopted HIBS proposal as "IAP" with 13 countries supports



<u>Africa:</u> SADC & EACO proposed in 3rd ATU WG (Jun. 2019) → ATU adopted HIBS proposal as "AFCP" in APM19-4 (Aug.2019)

Potential Schedule for New Regulations



Essential that WRC-19 adopts a new Agenda Item to allow for timely deployment of HIBS

Change the World

Your Support is Greatly Appreciated