MICROSOFT'S COMMENTS

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"PUBLIC POLICY CONSIDERATIONS FOR OTTs"

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Policymakers Must Focus Holistically on Promoting Innovation and Investment Throughout the Entire Internet Ecosystem and Not Just in Last Mile Access Networks

Over the course of the last several decades, the internet has transformed virtually every aspect of daily life - from how we buy and sell goods and services, to how we grow our food and manage its distribution, how we conduct financial transactions, how we entertain ourselves, how we communicate and interact with each other, and how we work - no matter what the field of employment. The low barriers to entry, the low cost of global delivery, and the nearly limitless diversity of offerings in the marketplace ensures that every person, institution, and business with an internet connection can have access to capabilities previously out of reach. The digital economy has flourished as a result of the open internet and the engine it provides for continuous innovation and invention.

All of this has been achieved through significant R&D, capital investment, and technical innovation across the entire range of the internet ecosystem, including not only network access providers, but also technology and equipment providers, as well as applications, content and service providers. The result is an era of innovation that has spawned new businesses around the world, while simultaneously benefitting the customers who rely on such offerings in their businesses and personal lives. Entrepreneurs no longer need access to significant sums of capital to reach millions of consumers, and customers no longer must spend unproductive time seeking solutions to their challenges and opportunities. Instead, novel ideas combined with little more than the ability to design and place an application on the internet can unleash innovation to the benefit of businesses, consumers and national economies.

The content, applications, and services accessible by internet users facilitate better access to health care, education, and big data resources—all key drivers of economic growth and prosperity. It also is fundamental to achievement of the UN's Sustainable Development Goals. The resources available through the internet can be leveraged to obtain life-saving information, diagnosis, treatment, and

remote monitoring to reduce the frequency of visits to a doctor (saving both time and money).[1] Moreover, high-quality internet access can help drive the success of "e-learning" and distance learning facilities—allowing students to continue learning outside of school and providing educational opportunities for remote and rural areas that were previously out of reach. The internet can also improve the quality of education by providing teachers with the ability to improve their knowledge and skills by obtaining accredited qualifications from internationally recognized platforms such as Coursera[2] and Khan Academy.[3] Finally, the millions of terabytes of data on the internet can be harnessed in surprising ways to help solve problems that have plagued parts of the world for centuries, such as famine. The Famine Early Warning Systems Network, for example, combines social and scientific data to predict where famines in remote regions are about to occur.[4] This and other sources of big data not only help world leaders respond to impending crises as quickly as possible, but also help prevent such crises in the first place by enabling farmers to make smart decisions when tending to their crops.[5] There is little doubt that a robust, open internet that enables access to the full panoply of online content, applications, and services is critical to every nation's economic and social wellbeing.

Ensuring that these benefits of the internet remain available to all the world's population requires a holistic viewpoint that encompasses the entirety of the internet ecosystem. One component of that ecosystem is the physical data access and distribution networks that connect end points on the internet. Those networks are themselves complex, being comprised of fiber backbone distribution systems, subsea cable systems, middle mile transit networks linked to numerous interconnection and exchange points, and copper, hybrid-fiber-coax, fiber, and both fixed and mobile wireless last mile networks. Increasingly, the primary means of access for the end user is now a mobile wireless connection and a portable smartphone, laptop or tablet. Continued investment and innovation in the physical networks and infrastructure providing access to the internet is critical to ensuring that everyone enjoys the benefit of the internet ecosystem.

But the internet ecosystem is far more than just the physical data networks that provide access to the internet. It also includes all the providers, hardware, networks, and technology resources of the applications, content, and services that are accessed by means of those physical networks. The world of online content, applications, and services, is perhaps the most dynamic component of the current internet ecosystem, offering a wide range of capabilities to all types of users and driving adoption of internet access services. The array of online content, applications, and services continues to expand, driving sustainable growth in the wider economy by improving communication, delivering relevant

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[1] Rebecca Ruiz, *How the Internet Is Changing Health Care*, FORBES (Jul. 30, 2009), available at https://www.forbes.com/2009/07/30/health-wellness-internet-lifestyle-health-online-facebook.html.

[2] *See* Coursera, *available at*: https://www.coursera.org/.

[3] *See* Khan Academy , *available at* https://www.khanacademy.org/.

[4] *See* Famine Early Warning Systems Network, *available at* https://www.fews.net/.

[5] For example, a new app for mobile devices, WetIn, can provide farmers with early flood warnings for the Niger-Benue river systems in Nigeria. *See* Jeremy Bird, *Stronger together: unlocking Africa's food production potential* CGIAR THRIVE BLOG (Aug. 10, 2016), https://wle.cgiar.org/thrive/2016/08/10/stronger-together-unlocking-africas-food-production-potential.

content and services to new audiences, easing collaboration and expanding educational opportunities, among other benefits.

A vibrant, growing internet economy requires a positive environment in which the services, applications, and content accessible over broadband internet access facilities can thrive. Achieving this environment requires a perspective in which the collection of online content, applications and services that comprise that internet is not considered an "issue" or "problem" to be solved by regulators and policymakers. To the contrary, policymakers and regulators should strive to create an environment in which online content, applications, and services are as widely available as possible. Policymakers and regulators must adopt mindsets that acknowledge and promote the value of online content, applications, and services. Only by adopting a policy mindset that appreciates the value of the *entire* internet ecosystem, and fostering a positive environment for the development and proliferation of compelling online content, applications, and services, will the internet remain a platform for innovation, competition, and sustainable economic growth, not only today, but also in the years to come.

There Is a Symbiotic Relationship Between Broadband Internet Access Service Providers and Online Applications, Content and Services

It is imperative that regulators and policymakers reject any notion of a tension between promoting the interests of network operators and promoting the interests of online providers of content, applications and services. Connectivity, content, applications, and services—while no longer tethered to a single network or network operator—all remain critically interdependent.

There is a symbiotic and self-reinforcing positive relationship between the networks underlying the internet and the applications, content, and services accessed by means of those networks. Put simply, customers depend on broadband internet access service to enjoy the applications, content and services they demand, and a thriving marketplace of applications, content, and services drives demand for more and better broadband internet access service. Broadband networks are useless without the applications, content and services they provide access to, and there is no way to access applications, content and services without broadband networks.

Policymakers must reject the notions advanced by some that online content, applications and services "free ride" on access networks. To the contrary, they drive increased demand for broadband internet access. A study by WIK found that broadband networks in Europe benefit significantly from increased bandwidth demand driven by incremental use of applications, and specifically that "higher demand (and potentially willingness to pay) are key in enabling profitable investment and reducing risks for telecommunications providers."[6] A more recent WIK study found that a specific set of online offerings, those which facilitate rich interaction among users, "has a substantial positive impact on

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[6] *See* WIK, *Applications and Networks: The Chicken or the Egg, the Role of Digital Applications in Supporting investment and the European Economy*" (March 2, 2015) at 3, available at http://www.wik.org/index.php?id=studiedetails&L=1&tx_ttnews%5BbackPid%5D=85&tx_ttnews%5Btt_news%5D=1702&cHash=6a5a758243c9018024f69050a5c75299.

telecommunications' providers business."[7]   Indeed, WIK concluded that "RIAs generate a significant component of the socioeconomic impact of the digitization of the internet itself."[8]   Because of the increased demand for broadband and data connections, traditional network operators benefit significantly from consumer demand for the edge offerings that are delivered over the internet.[9] Conversely, online content, application, and service providers remain critically dependent on more and better broadband internet connections to their customers. The untethering of features and services from physical networks has only strengthened the interdependent and synergistic relationships between applications and networks. The notion of a zero-sum relationship between network operators and online offerings is simply a myth.

Legacy Regulation is Inappropriate for Online Applications, Content and Services, and Can Harm Growth of the Digital Economy

It is critical that policymakers refrain from reflexively extending legacy regulation to the world of online content, applications and services, and create barriers that can adversely impact the evolution of the internet ecosystem. The pace of change in the way the world interacts continues to accelerate, driven by fundamental shifts in the technology of communications networks, the capabilities offered over those networks, and the relationships between those networks and capabilities. Regulation, meanwhile, rarely evolves at the same velocity as technological progress. Thus, national regulators must look forward to where markets and technology will be and not just where they are now. Such foresight is necessary to determine whether current regulations remain fit for purpose, new regulations are necessary, as well as the potential impact of such regulations on enabling sustainable growth of national digital economies.

Some have approached the regulatory debate by trying to define "OTT services," or other terms, and then argue that there is a need to "level the playing field," usually by applying legacy, traditional telecommunications regulations to the newly defined term. This is a misguided approach to crafting a modern telecommunications regulatory framework that is designed to promote universal internet access. Legacy regulations should not simply be transposed to new online features and capabilities. Any regulations—whether legacy telecommunications services or new online capabilities—must consider the rationale behind the regulation (for example, protecting end users and competitors from the potentially anti-competitive effects of market power related to control of broadband access facilities), and not impose heightened regulation that risks destroying innovation. It is important in this respect to consider that legacy regulations on traditional telecommunications service providers were designed to address the market power resulting from incumbent control over network access facilities and resultant risks to end users and competitors—gating and consumer protection factors that simply do not apply to online offerings.

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[7] WIK, *The Economic and Societal Value of Rich Interaction Applications (RIAs)*, (May 2017) ("WIK RIA Study) at ii, available at http://www.wik.org/index.php?id=879&L=1.

[8] *Id* at i*.

[9] *See, e.g.,* ctia, *Wireless Snapshot 2017* ("ctia Wireless Snapshot 2017") (increased amount of smartphone data usage due, in part, to "new applications and services"), available at https://www.ctia.org/docs/default-source/default-document-library/ctia-wireless-snapshot.pdf.

It also is important to note that consumers view applications delivered over the internet as quite different from services delivered by traditional telecommunications service providers, and such choice is exactly what a well-functioning competitive market should strive to retain. The vast majority of content, applications, and services delivered over the internet are not substitutes for traditional telecommunications services. Traditional telephone services do not allow video chats, instant messaging, document and file sharing, or emojis as part of a conversation. It should thus be no surprise that the recent WIK study expressly found that consumers do not use Rich Interaction Applications as substitutes for traditional communications services.[10]

The Term "OTT" is Neither Meaningful nor Helpful

Although many commentators and industry players often refer to "OTTs," there is no common understanding of the term. Indeed, trying to define the term is folly, because it can mean different things to different people, it is entirely dependent on context, and the potential scope of what it can refer to is nearly limitless. With respect to the internet ecosystem, "over the top" potentially includes everything that is provided untethered to the offering of broadband internet access service through a network operator. In other words, nearly the entirety of the internet—every website, every application, every web search, every service, all internet-accessible content—could be considered OTT.

It is time to abandon the terms "OTT", "OTT services," and all other derivations that include "OTT." They are neither meaningful nor helpful to policy debates.

Nor is it helpful to try to add qualifiers, such as "OTT communications services." Such a phrase still fails to clearly delineate what applications and capabilities are and are not included within its scope. Since its advent over four decades ago, communications capabilities have been integral to the development of the internet itself. In fact, a primary purpose of the internet was to enable sharing of innovation amongst researchers globally. Email was one of the first capabilities fueled by ARPANET, the precursor to the modern internet. Instant messaging has been a common capability at least since portals such as AOL and Yahoo! became commonplace. Blogs, with user comments and interaction, have been commonplace since the late 1990s. Even voice has a long history on the internet. Voice communications were first tested over the ARPANET in the early 1970s; the first VoIP application, Speak Freely, was released in 1991; and in 1995 VocalTec released the first commercial VoIP application known as internet Phone.   Today, nearly every website, every content provider, and every application has some communications capability. In-game chat is a nearly ubiquitous feature of mobile gaming applications, from Words with Friends to Minecraft. Beyond games, in-app chat is a common feature across the application landscape, from babysitting apps such as Sitter (http://sitter.me/blog/chat-babysitters-families/) to the popular car hailing app Uber (https://newsroom.uber.com/in-app-chat/). And there are specialty messaging apps, such as Disney's Mix, focused on specific user groups. The reality is that communications capabilities on the internet are legion, to the point that such capabilities are a fundamental aspect of the fabric of the internet itself. Thus, the phrase "OTT communications services" adds no greater clarity than the term "OTT."

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[10] *See WIK RIA Study* at ii.

Trying to limit discussion to "OTT services that compete with traditional telephony services" is similarly unhelpful. First, there is the question of what should be considered a traditional telephone service. TDM voice? IP voice? Voice mail? Conferencing? SMS? More fundamental is the problem of delimiting what it means to compete with any such capabilities. In some sense, any means of communications "competes" with any other means of communications. Thus, the spoken word competes with the written word and voice telephony competes with letters and the post. Email competes with voice telephony. IM competes with email. Emojis compete with words. All of these capabilities and media compete with each other as means of communication. Yet, in another sense, today's online destinations and offerings, even while they offer a variety of communications capabilities, have such a wealth of integrated and varied features that they are not substitutes for and do not compete with traditional voice telephony. Indeed, as a recent WIK study found, the most successful online offerings provide a broad suite of rich interaction capabilities, including file sharing, group creation, sending of video messages, and even money transfers.[11] Competition among online applications is driving such applications to diversify and offer more and more capabilities to keep users engaged.   It is, therefore, not surprising that WIK found that most such applications "are not descended from telephony and SMS; instead, they follow a distinct evolutionary line" and generally show "a provenance and evolution that is distinct from traditional telecommunications services. And, as RIAs have evolved along their own technology pathway, the user experience with RIAs is becoming closer to people's use of the internet in general."[12] Essentially, online applications compete with each other and the internet as a whole, not with the limited functionality of traditional voice telephony. Trying to limit discussion to "OTT services that compete with traditional telephony" is thus just as meaningless as using the terms "OTT" or "OTT services."

There simply is no value in trying to use "OTT" as a reference term for policy or regulatory discussions. For regulatory or policy discussions to be meaningful, they must be grounded in terminology that more precisely delimits the scope of discussion and the capabilities in question.

The ITU Should Focus on its Core Competencies

Beyond the issue of terminology, the ITU is not the appropriate forum to debate the question as to whether online applications, content, or services should or should not be regulated.   The ITU is not and should not become the worldwide regulator of the internet. Nor should it dictate to individual nations whether and how to regulate any particular applications, capabilities, content or services as telecommunications services. That must remain the province of individual nations and jurisdictions (e.g., the EU). The ITU has an important role to play in promulgating standards for international network connectivity and spectrum allocation, and it has a critical remit to foster greater worldwide connectivity. Those are the core competencies of the ITU. The ITU should not divert attention and resources from its core competencies by wading into questions of national sovereignty, such as whether certain content,

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[11] Dr. Renee Arnold, *et. al., The Economic and Societal Value of Rich Interaction Applications (RIAs)* (May 2017) ("WIK RIA Study), available at http://www.wik.org/index.php?id=879&L=1.

[12] *Id.*

applications, or services should or should not be regulated. Together with ITU-T SG3 Q9/3 and ITU-D SG1 Q1/1, this Open Consultation in the CWG-I is (at least) the third workstream within the ITU looking at "OTT" policy issues. At a minimum, this suggests an inefficient and duplicative use of ITU, government and industry resources. It also indicates a fundamental lack of consensus that this is an appropriate issue for consideration anywhere within the ITU. The ITU would be better served, and would better serve the interests of its members, by re-focusing on its core competencies and no longer wading into issues such as this that divert from those core competencies.