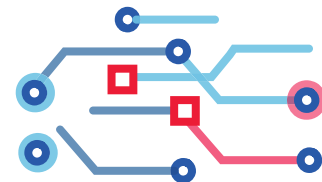




REPUBLIC OF SERBIA
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AND POSTAL SERVICES

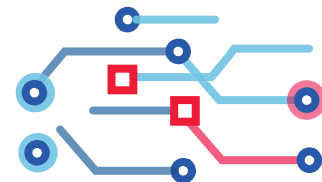


Over the Top Services

Market Impact and Regulatory Framework

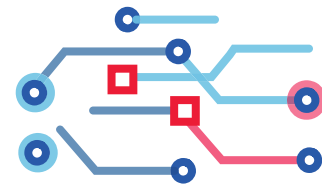
Dr Tatjana Cvetkovic, Sanja Vukcevic Vajs

Contents



- Development of the electronic communication services
- OTT services and electronic communication market
- Definitions and examples of OTT services
- OTT services regulation
- Questions

EC services - changes

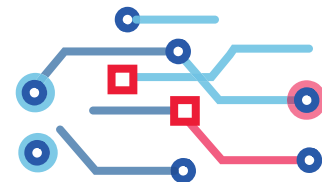


SERVICE		
VOICE	fixed, mobile phone	applications: Skype, WhatsAPP, Viber
TEXT MESSAGE	telegram, SMS	applications: FB messenger, WhatsApp, Viber
VIDEO CONTENT	broadcasting, cable distribution	Netflix, Youtube



NETFLIX

OTT services and EC market



WhatsApp, Facebook Messenger, WeChat, Viber, Line and KakaoTalk:

2014 – 2.5 billion users

2018 – more than 5 billion users

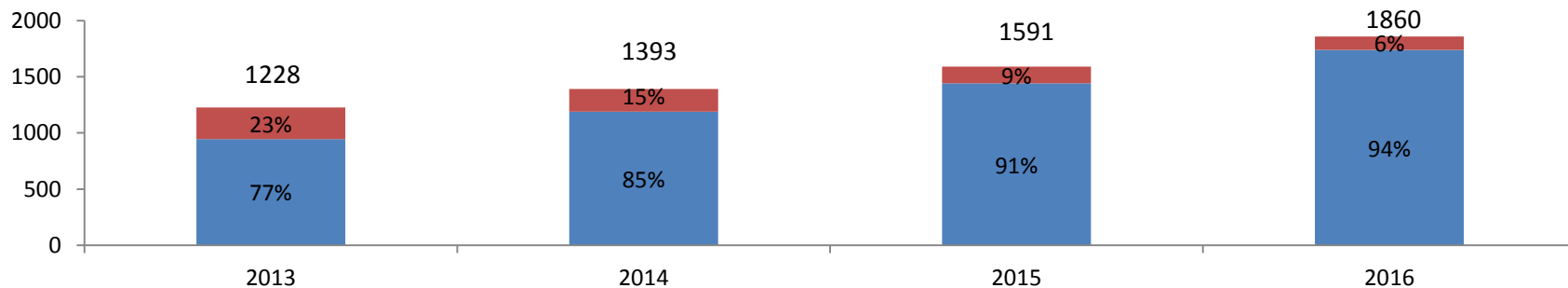
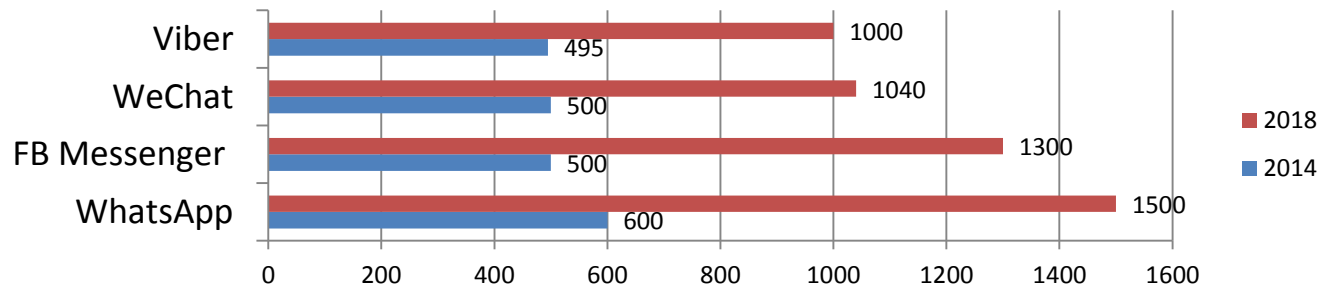
Estimation:

OTT providers income in the 2020 - 10 billion US\$ per year



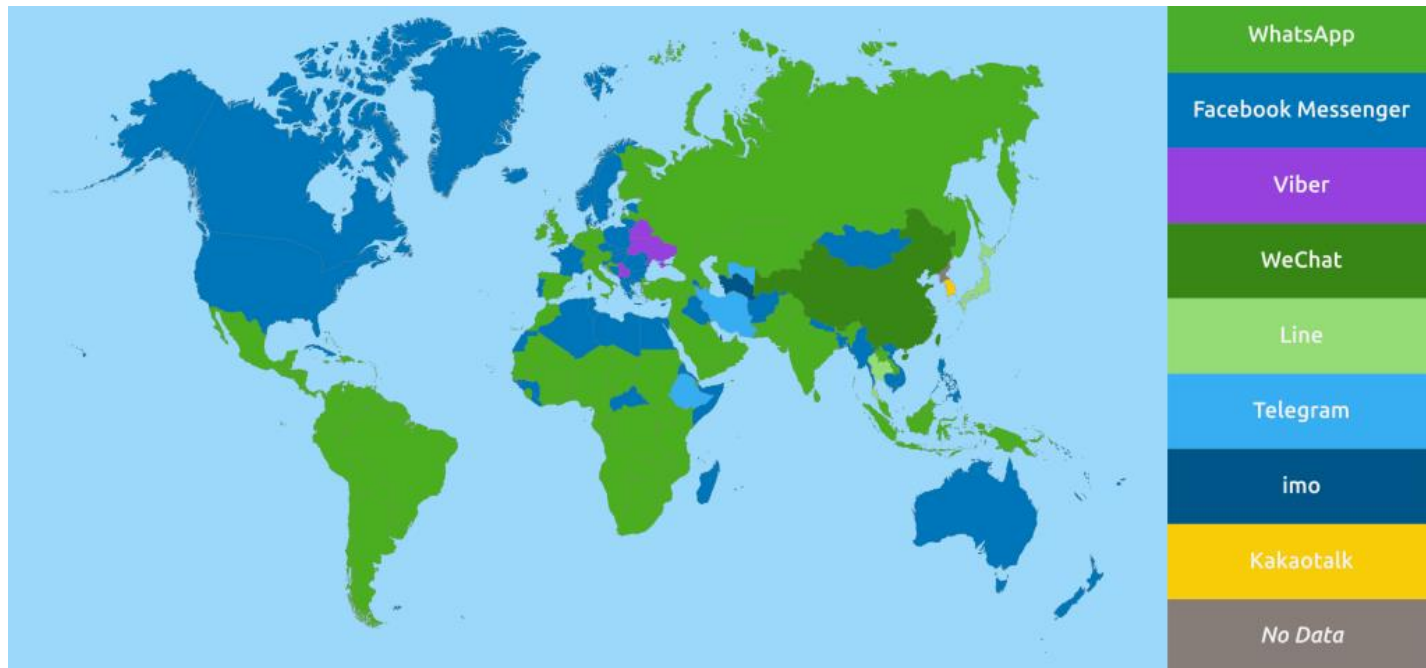
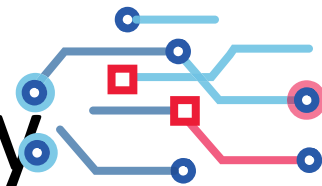
Source: European Parliamentary Research Service, www.statista.com, www.recode.net

Number of users by apps



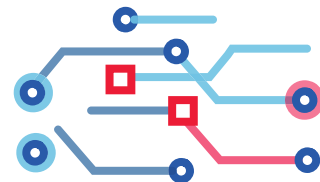
Source: www.statista.com, www.recode.net

Top OTT messengers by country



Source: Hootsuite, December 2017

OTT services in Serbia (1)



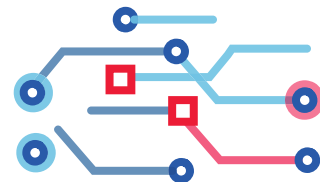
OTT voice services – VoIP operators and applications

- 26 VoIP operators

Voice applications

- GO4YU Calling (Talk&Text) - **Telekom Srbija**
- OrionRing+ **Orion Telekom**
- Unifon – **SBB**

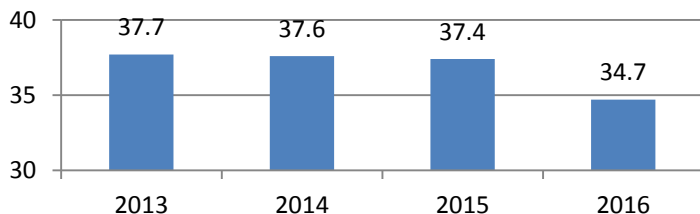
OTT services in Serbia (2)



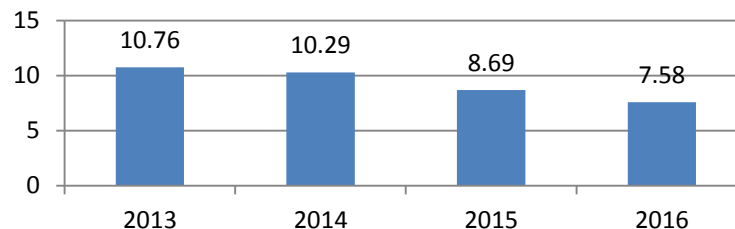
OTT media services

- OTT media providers based outside Serbia: **Netflix, Pickbox, Net TV Plus, Google TV, Amazon prime**
- OTT media providers based in Serbia offering content of other content providers, using their own platform: **KlikPink (Pink Media Group), D3 GO, (SBB), MTS TV GO (Telekom Srbija), Orion TV (Orion Telekom), Globaltel**
- OTT media providers based in Serbia, offering their own content via their own platform: **RTS Planeta**

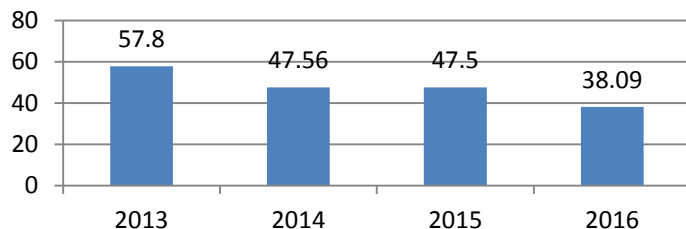
Trends in EC market in Serbia



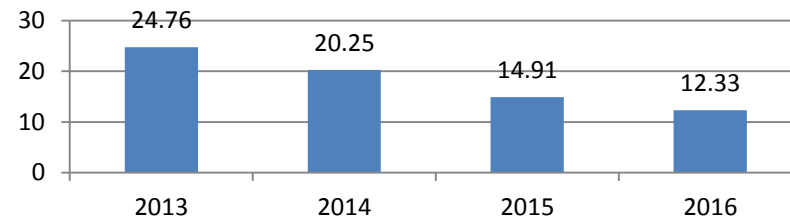
Revenues from fixed telecom network services (billion RSD)



Number of sent SMS (billion)

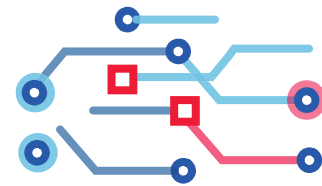


Roaming revenues (million €)



Number of sent MMS (million)

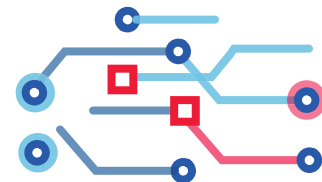
Source:RATEL






EC operators - OTT providers

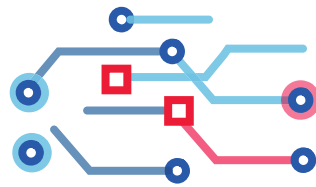
Area of regulation	EC operators	OTT providers
Licensing, registration	+	-
Services limited by network availability	+	-
Data protection and privacy	+	-
Data retention and lawful interception	+	-
Regulatory fees and taxes	+	-
Number portability	+	-
QoS	+	-

OTT services - definitions



-  **ITU** On-line application/service, which can potentially replace traditional telecommunication and audio-video services such as voice telephony, SMS, VoD and TV.
-  **BEREC** OTT service is a content, a service or an application that is provided to the end user over the public Internet.
-  **Detecon Consulting** OTT communication and OTT media

OTT regulation- examples



- Singapore - licenses for VoIP connecting to PSTN
- USA – no license, obligation for emergency calls and LI
- EU - no license, (FR, ES block OTT - PSTN)
- UAE - OTT only with licensed operators
- Egypt - VoIP over mobile forbidden
- Saudi Arabia - OTT blocked - LI problems
- Bahrain - licenses for VoIP connecting to PSTN

Source: Detecon Consulting 2014

Evolution of sector regulation



1. **2009 Framework Directive** (amending Directive 2002/21/EC) - OTT not defined
2. **BEREC Report on OTT services (BoR 2016)**
 - OTT-0: OTT = ECS (ViberOut, SkypeOut,...);
 - OTT-1: OTT potentially competes with an ECS, (Skype, Viber, WhatsApp, Google Talk,...);
 - OTT-2: other OTT services (facebook, youtube, e-bay)
3. **Proposal for a Directive of the European Parliament and of the Council establishing the European Electronic Communications Code** (Recast, June 18)

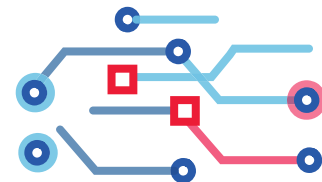
EECC



Electronic communications service - definition:

1. **internet access service**
2. **interpersonal communications service - ICS**
 - **number-based ICS** – *consumer rights, interoperability, number portability, emergency services, QoS*
 - **number-independent ICS** – *emergency services if tech. possible, details left to NRA's discretion...*
3. **other services** – conveyance of signals: M2M, broadcast...

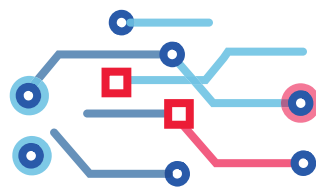
EECC - comments

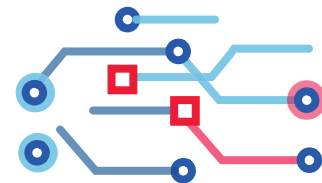
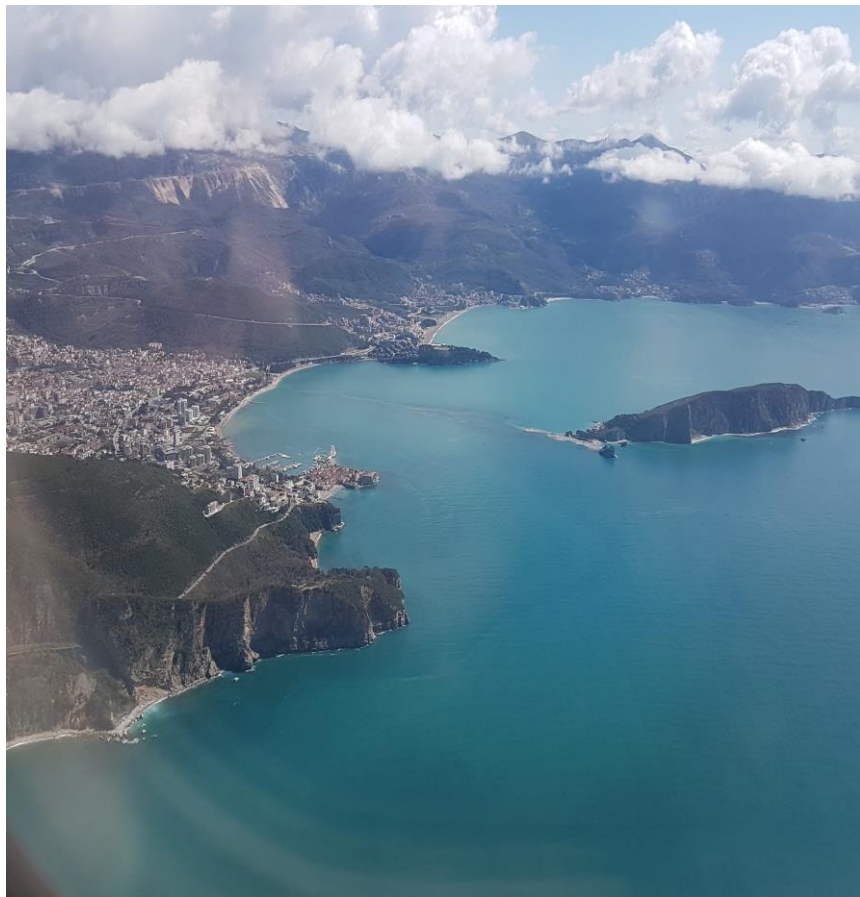


- ETNO, GSMA : infrastructure investment
- CCIA and Digital Europe against OTT regulation
- Emergency services - 112 obligation - where technically possible
- LI not defined for OTT providers
- How to impose obligation on non-European OTT providers?

?

- global / regional
- consumer rights
- charging OTT providers





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