H2020 5G-TRANSFORMER Project
Grant No. 761536

Demonstrations at EuCNC'18 or equivalent

Abstract

One of the dissemination goals of 5G-TRANSFORMER is to present technical demonstrations of project results in relevant events. This document briefly explains the demonstration activities carried out during EuCNC 2018 in Ljubljana as well as the web and social media-related metrics gathered during that period, which substantially improved. Other information related with the demonstrations carried out by the project is also provided.

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1 Introduction

As part of the Communication, Dissemination, and Exploitation Plan (CoDEP) [1] of the project, one of its dissemination goals of 5G-TRANSFORMER is to present technical demonstrations of project results in relevant events. They are used to showcase in a tangible way what is presented in the form of deliverables, papers, talks, etc. in other venues. This document briefly explains the demonstration activities carried out during EuCNC 2018 in Ljubljana. Four demonstrations were showcased at that event, namely:

- Orchestrating entertainment network service deployment in a hybrid cloud with Cloudify.
- Creating a media-oriented slice through the 5G-Transformer vertical slicer.
- Robotic control leveraging a Radio Network Information Service (RNIS).
- 5G network slices for mobile communication services.

News were generated in the project website during the event [3]. Additionally, web and social media-related metrics gathered during while EuCNC 2018 was taking place are also presented. As observed in the statistics graphs, the main conclusion is that web and social media metrics improved during EuCNC 2018. Furthermore, links to videos on the project YouTube channel [4] and posters of the demos are also provided below.

Information on other demonstrations carried out by the project as well as a summary of communication, dissemination, and exploitation activities can be found in D7.3 [2].

2 Demonstrations

The following sections briefly explain the scope of each demonstration presented at the joint 5G-TRANSFORMER, 5G-CORAL, and 5GEx booth. A sample of the pictures taken at the booth during the event follow.

FIGURE 1: PANORAMIC VIEW OF THE JOINT 5G-TRANSFORMER, 5G-CORAL, AND 5G-EX BOOTH

FIGURE 2: VISIT OF EU COMMISSION REPRESENTATIVES TO THE PROJECT BOOTH

FIGURE 3: PART OF THE 5G-TRANSFORMER PROJECT TEAM AT THE BOOTH

2.1 Orchestrating entertainment network service deployment in a hybrid cloud with Cloudify

This demonstration shows the deployment of high definition streaming service with smart placement of virtual appliances at the edge to avoid bottlenecks in the core of the network and provide a low latency service. The demonstration utilized custom Cloudify extension(s) to provide a transparent abstraction of the network and automatic provisioning of intercloud connectivity and configurations, i.e., AWS and 5TONIC. Further details are available at the following links.

2.1.1 Demonstration Poster

http://5g-transformer.eu/wp-content/uploads/2018/06/5G-Transformer-poster_Demo_Atos_Mirantis_a1.pdf

2.1.2 Demonstration video

https://www.youtube.com/watch?v=MhxpLNuTOEE

2.2 Creating a media-oriented slice through the 5G-Transformer vertical slicer

This demonstration presents the deployment of high definition streaming service with smart placement of virtual appliances at the edge to avoid bottlenecks in the core of the network and provide a low latency service. The demonstration utilized custom Cloudify extension(s) to provide a transparent abstraction of the network and automatic provisioning of intercloud connectivity and configurations, i.e., AWS and 5TONIC. Further details are available at the following links.

2.2.1 Demonstration Poster

http://5g-transformer.eu/wp-content/uploads/2018/06/5G-Transformer-poster_Demo_Atos_Nextworks_a1-1.pdf

2.2.2 Demonstration video

https://www.youtube.com/watch?v=sRH4m_eQ6NM

2.3 Robotic control leveraging a Radio Network Information Service

This demonstration showcased the run-time application behaviour adaptation utilization of RAN-level information. The demonstration setup constituted: a Lego Mindstorms robot connected to the LTE OpenAirInterface eNodeB and Evolved Packet Core (EPC); a Mobile Edge Computing (MEC) platform that extracts Radio Network Information (RNIS) using the FlexRAN protocol and exposes the service through a RESTful API; and a robotic control application that utilizes the RNIS to control the motion of the robot at run-time. Potential application areas include automated channel quality surveys/mapping, remote surveillance in disaster recovery situations, etc.

FIGURE 4: PICTURE OF THE ROBOT INVOLVED IN THE ROBOTIC CONTROL LEVERAGING A RADIO NETWORK INFORMATION SERVICE DEMONSTRATION

2.3.1 Demonstration Poster

http://5g-transformer.eu/wp-content/uploads/2018/06/5G-Transformer-poster_Demo_EI-IDCC-v29795.pdf

2.4 5G network slices for mobile communication services

This demonstration focuses on the slicing capabilities of the 5G-TRANSFORMER system through one of its key building blocks, the Vertical Slicer. This building block is used in other demos, e.g., the on described in section 2.2. In this sense, this demonstration, explains on architectural aspects rather than presenting vertical-oriented services.

2.4.1 Demonstration Video

https://www.youtube.com/watch?v=0QxeZerDZKQ&t=1s

3 Web and social media

The project also evaluated the impact of showcasing its technology, and, in general, participating to EuCNC 2018 through paper presentations, project overview talks, etc. This section presents some of the statistics gathered for the web and social media of the project. As can be observed, the main conclusion is that web and social media metrics improved during EuCNC 2018 (June 18-21), showing peaks of various metrics during the days of the conference.
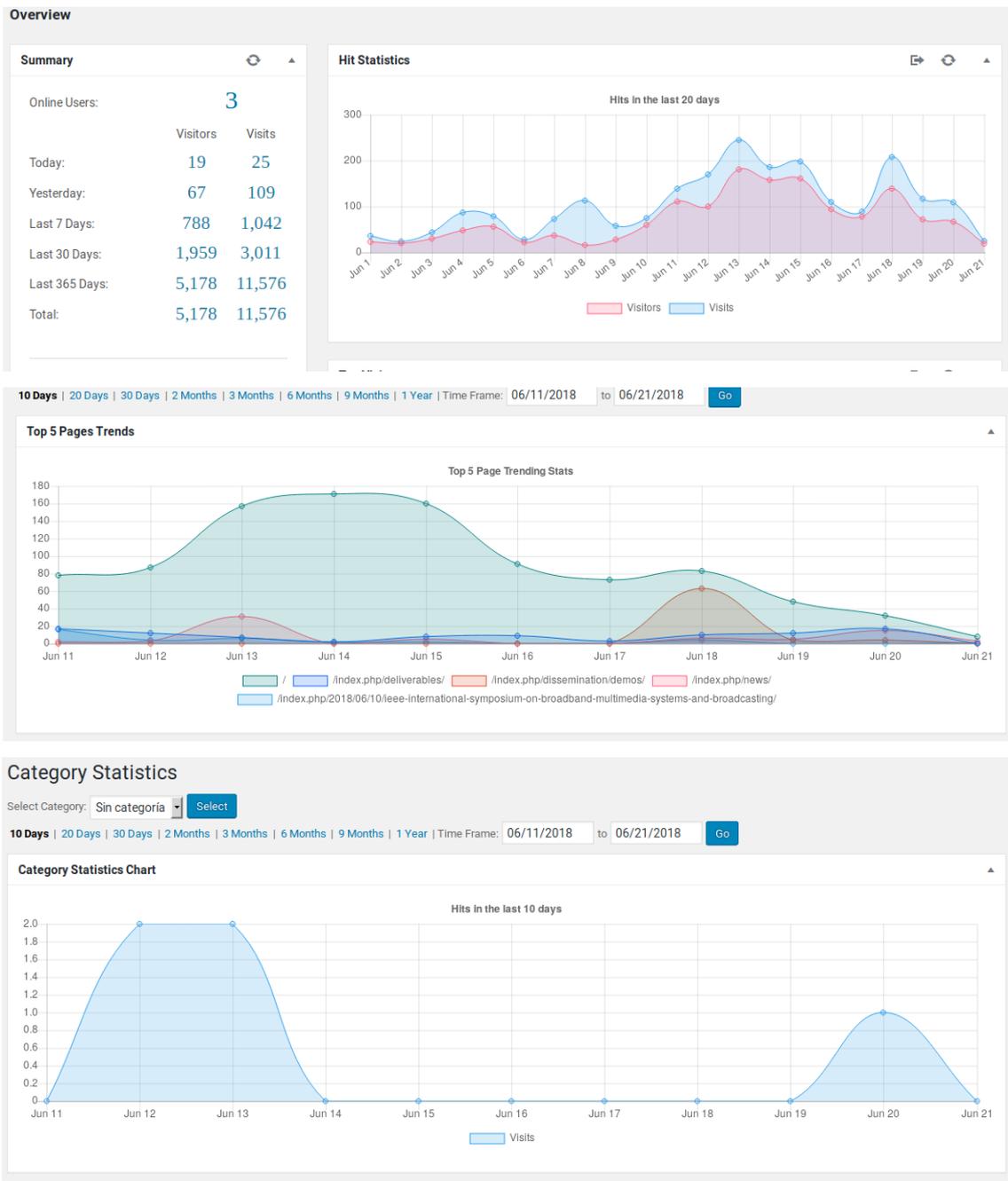

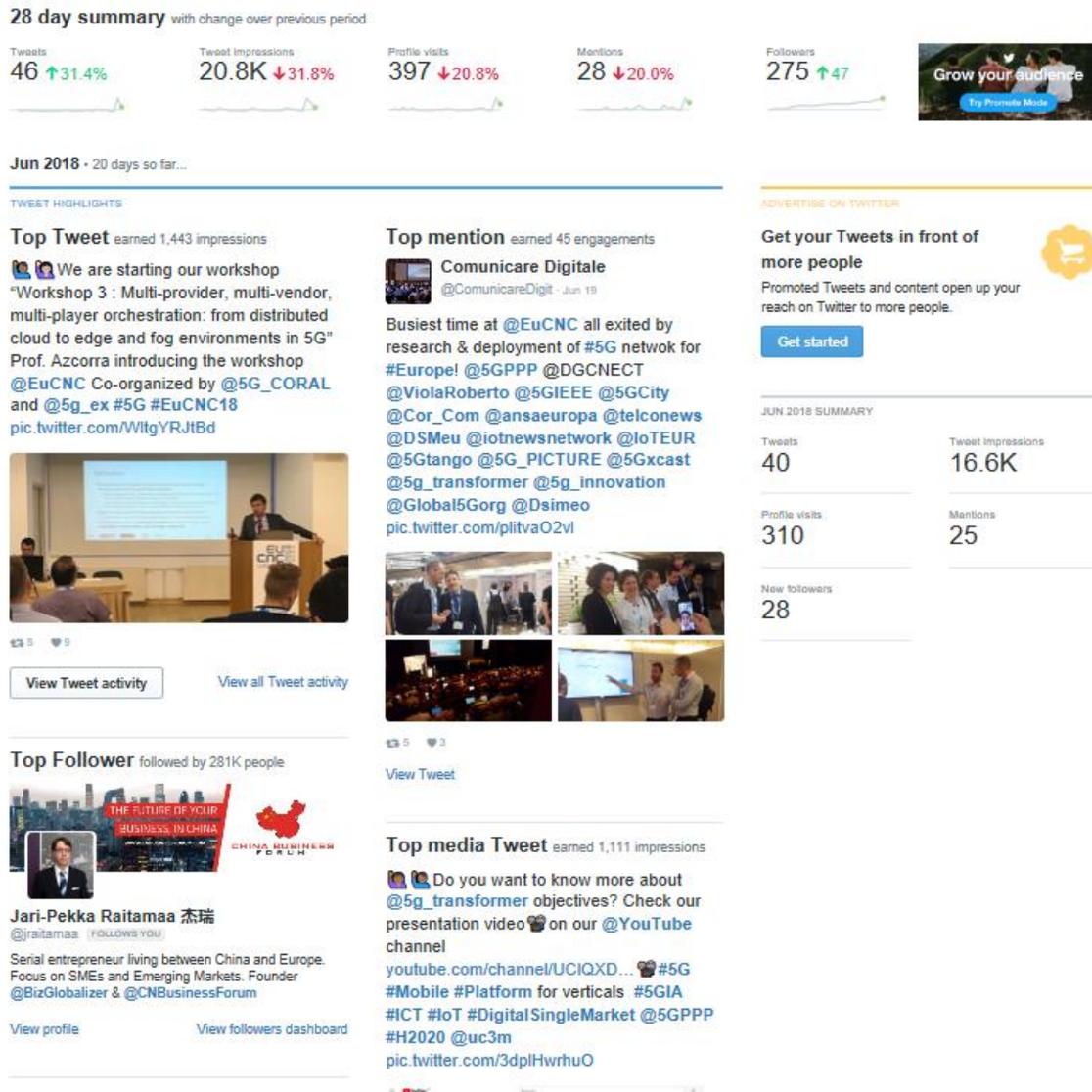FIGURE 5: 5G-TRANSFORMER WEB STATISTICS DURING EuCNC 2018

28 day summary with change over previous period

Tweets	Tweet impressions	Profile visits	Mentions	Followers
46 ↑31.4%	20.8K ↓31.8%	397 ↓20.8%	28 ↓20.0%	275 ↑47

Grow your audience
Try Promote Mode

Jun 2018 · 20 days so far...

TWEET HIGHLIGHTS

Top Tweet earned 1,443 impressions

We are starting our workshop "Workshop 3 : Multi-provider, multi-vendor, multi-player orchestration: from distributed cloud to edge and fog environments in 5G" Prof. Azcorra introducing the workshop @EuCNC Co-organized by @5G_CORAL and @5g_ex #5G #EuCNC18 pic.twitter.com/WltgYRJtBd

♻5 ♥9

View Tweet activity   View all Tweet activity

Top Follower followed by 281K people

THE FUTURE OF YOUR BUSINESS IN CHINA
CHINA BUSINESS FORUM

Jari-Pekka Raitamaa 杰瑞
@jraitamaa FOLLOWS YOU

Serial entrepreneur living between China and Europe. Focus on SMEs and Emerging Markets. Founder @BizGlobalizer & @CNBusinessForum

View profile   View followers dashboard

Top mention earned 45 engagements

Comunicare Digitale
@ComunicareDigit · Jun 19

Busiest time at @EuCNC all exited by research & deployment of #5G netwok for #Europe! @5GPPP @DGCNECT @ViolaRoberto @5GIEEE @5GCity @Cor_Com @ansaeuropa @telconews @DSMeu @iotnewsnetwork @IoTEUR @5Gtango @5G_PICTURE @5Gxcast @5g_transformer @5g_innovation @Global5Gorg @Dsimeo pic.twitter.com/plitvaO2vl

♻5 ♥3

View Tweet

Top media Tweet earned 1,111 impressions

Do you want to know more about @5g_transformer objectives? Check our presentation video on our @YouTube channel youtube.com/channel/UCIQXD... #5G #Mobile #Platform for verticals #5GIA #ICT #IoT #DigitalSingleMarket @5GPPP #H2020 @uc3m pic.twitter.com/3dplHwrhuO

ADVERTISE ON TWITTER

Get your Tweets in front of more people

Promoted Tweets and content open up your reach on Twitter to more people.

Get started

JUN 2018 SUMMARY

Tweets	Tweet impressions
40	16.6K

Profile visits	Mentions
310	25

New followers
28

FIGURE 6: 5G-TRANSFORMER TOP TWEETS DURING JUNE ARE THOSE PUBLISHED DURING EuCNC 2018
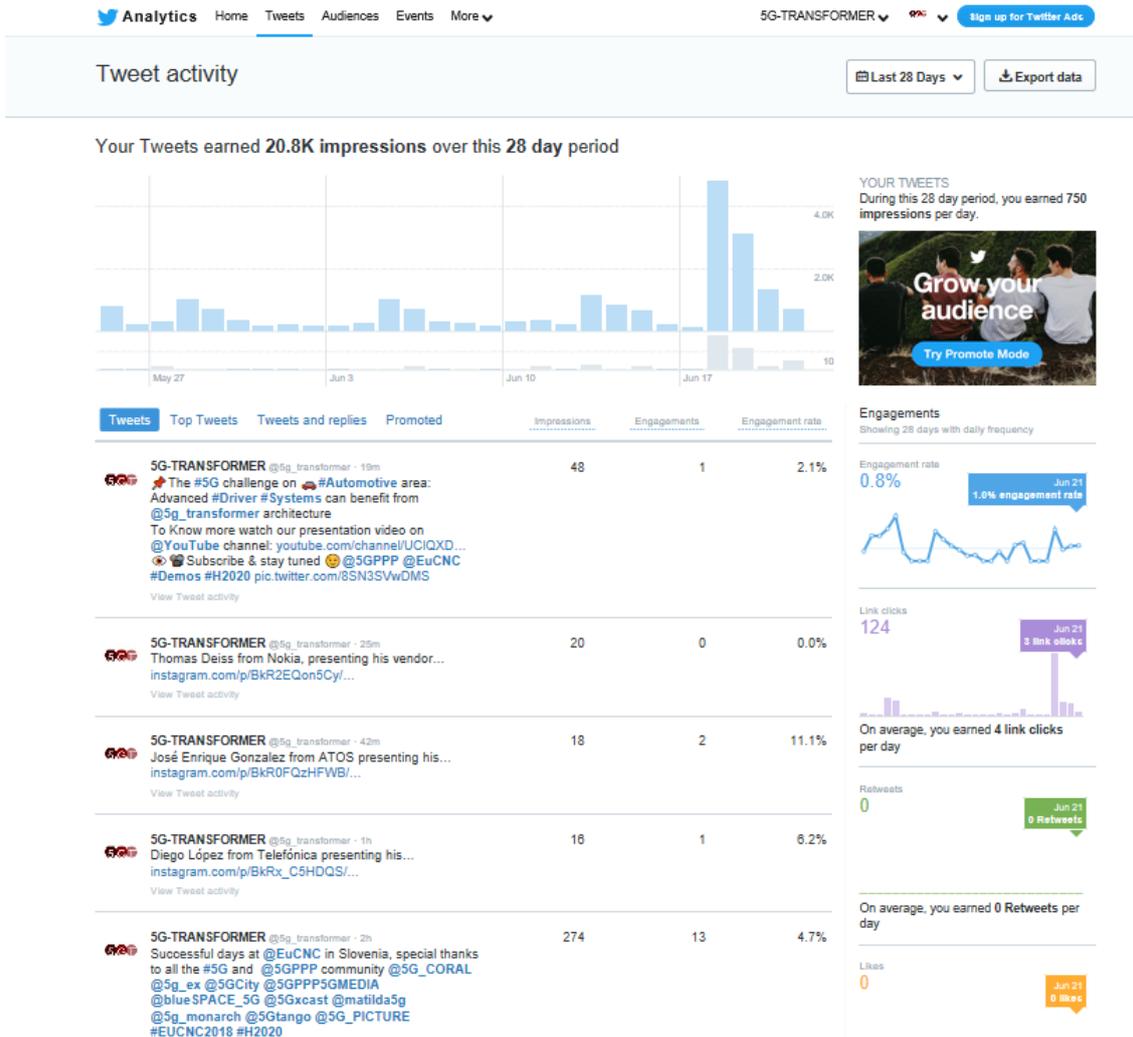
FIGURE 7: 5G-TRANSFORMER TWITTER STATISTICS DURING EuCNC 2018

4 Estimate of visitors to the booth

As for the number of visitors to the booth, a rough estimate follows. Out of a total of 43 visitors, 21 came from academia, 5 from state/European agencies, and 17 from industry.

5 References

[1]. 5G-TRANSFORMER. "Communication, Dissemination, and Exploitation achievements of Y1 and plan for Y2." Deliverable D6.2, May 2018.

[2]. 5G-TRANSFORMER. "First periodic report of the project." Deliverable D7.3, June 2018.

[3]. 5G-TRANSFORMER News. Available at: http://5g-transformer.eu/index.php/news/

[4]. 5G-TRANSFORMER YouTube channel. Available at: https://www.youtube.com/channel/UClQXD0lCxTK9eh_mQzMweww