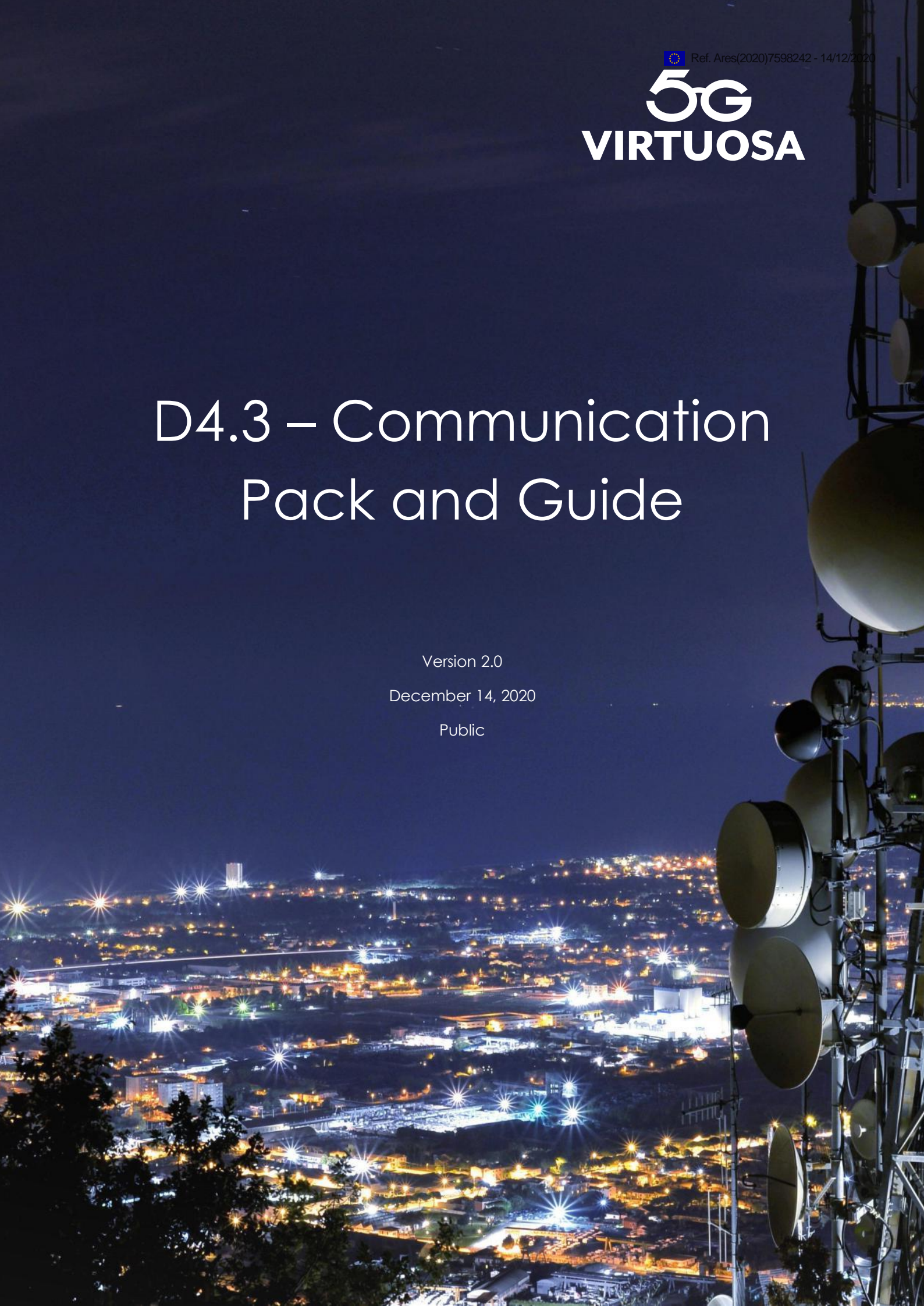


D4.3 – Communication Pack and Guide

Version 2.0

December 14, 2020

Public



Grant Agreement No.: 866656

Project Acronym VIRTUOSA

Project Title Scalable Software Defined Network Architectures for Cooperative LIVE Media Production exploiting Virtualised Production Resources and 5G Wireless Acquisition

Project Start Date (and Duration) 1 September 2019 (24 months)

Work Package D4.3 – Communication Pack and Guide

Due Delivery Date 31 December 2019

Actual Delivery Date 14 December 2020

Lead Participant for this Deliverable Nevion AS (NEVION)

Lead Responsible Olivier Suard & Cosimo Gualano

Dissemination level Public

Type DEC: Websites, patents filling, press & media actions, videos, etc.

Status Version 2.0

History of changes		
Version	Date	Change
0.1	05 December 2019	Original version
1.0	10 December 2019	Reviewed and updated
2.0	14 December 2020	REQUEST FOR REVISION: Placeholders and question marks have been resolved to complete the communication pack and guide.

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1. Executive summary

This document presents a Communication Pack and a short Communication Guide for the VIRTUOSA project.

The Error! Reference source not found. is a first set of valuable and quality communication/promotional materials and tools written in an understandable way for non-specialists that has been produced in order to promote wide dissemination and communication of the VIRTUOSA project and its results.

It comprises of the project logo, the branding guideline (color palette, typography, etc.), the use of EU emblem and disclaimer, a deliverable report template (Word), a project presentation (PowerPoint), first press release (no.1), first newsletters (no.1, no.2, no.3), first project brochure (no.1), first roll-up banner (no.1) and first videos (no.1, no.2).

The Communication pack is part of our Communication Phase I (Initial awareness) which focus to create initial awareness in markets and define most relevant stakeholder. The VIRTUOSA project and its innovation shall be promoted as wide as possible. Therefore, project's branding and first set of communication materials have been developed, besides the successful launch of a website and social media presence (see **D4.1 Project Website and Social Media launch**) to create recognition among stakeholders.

The Error! Reference source not found. is a short guidance for members of the consortium how to use the communication materials and how to report planned and completed communication and dissemination activities.

2. Introduction

2.1. About this document

2.1.1. Purpose of this document

The purpose of this document is to present the deliverable **D4.3 – Communication Pack and Guide** of the VIRTUOSA project. This comprises a set of communication materials and guidance how to use it.

Please note that the project website and social media launch has been already described in detail in the deliverable **D4.1 – Project Website and Social Media launch**.

2.1.2. Document structure

The main part of this document covers:

- Error! Reference source not found. **(section Error! Reference source not found. and Annex 1-7):** a first set of valuable and quality communication/promotional materials and tools, i.e.:
 - logo
 - branding guidelines (color palette, typography, etc.)
 - EU emblem and disclaimer
 - deliverable report template (Word)
 - project presentation (PowerPoint) (no.1),
 - press release (no.1),
 - newsletters (no.1, no.2, no.3),
 - brochure (no.1)
 - roll-up banner (no.1)
 - videos (no.1, no.2)

in an understandable way for non-specialists in order to promote wide dissemination and communication of the VIRTUOSA project and its results

- **Communication Guide (section 3):** a short description of the communication procedures, including how to report planned and completed communication and dissemination activities.

2.1.3. Audience

This document is public.

3. Communication Pack

3.1. Branding - Project's corporate identity

A brand was designed to maintain visual coherence in all communication materials, presentations and reports produced within the project.

VIRTUOSA's graphic identity includes:

- **Logo:** colors, proportions, variations on white and colored backgrounds
- **Typography:** font type and size
- **Color palettes:** for use in standard in Microsoft Office documents, and other communication material
- **Templates:** basic layouts for Word and PowerPoint document, to ensure consistency in communication
- **EU emblem and EU disclaimers:** the Word and PowerPoint templates display the EU emblem and EU disclaimers to acknowledge the support received by the European Commission. This ensures that all written material includes these. For other material, e.g. video, the emblem and disclaimers will be included also.
- **Tagline:** a short tagline has been picked to highlight VIRTUOSA's potential of Virtualization and 5G of live broadcast production.

The project logo and brand creation were done in cooperation with an EU-based external agency (i.e. a Design Agency), in order to get some professional support. The bulk of the work, including the creation of content and templates was carried out by members of VIRTUOSA's communication team.

3.1.1. Tagline

Finding a short snappy tagline for a complicated project, is always a challenge. The VIRTUOSA project is using the potential of 5G and Virtualization in live broadcast production. For that reason, the selected tagline for the VIRTUOSA project is:

Tagline:

“Exploring 5G and virtualization in broadcast production”

3.1.2. Logo

The initial version of the logo and graphic identity was launched in October 2019:

Logo:



The logo is simple and versatile. It also emphasizes the 5G aspect of the project, which is the most-high profile and ground-breaking aspect of the project.

The 5G part of the logo is designed to look a little bit like a pair of glasses, reflecting the fact that the project is “exploring” the potential of the 5G technology.

The logo in various formats is made available for download in the Project Repository and on the VIRTUOSA website (see [Annex 1: Logo](#)).

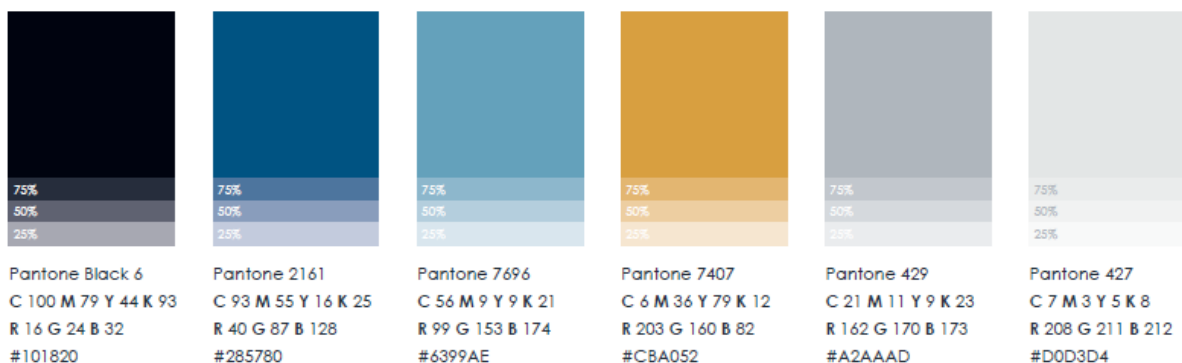
3.1.3. Brand guidelines

In developing the brand guidelines, the VIRTUOSA project was keen to create an identity that was separate from that of any of the participants. The brand needed to reflect the professionalism of the project (this is not a consumer brand for example). It also needed to be simple to use (e.g. standard fonts).

The Virtuosa 5G logo is at the core of our visual identity. When using the logo there are some simple rules to follow which is made available for download (PDF file) in the Project Repository and on the VIRTUOSA website (see [Annex 2: The Brand guidelines](#)).

3.1.3.1. Color palette

The corporate primary colors provide a definite, solid and professional base for the VIRTUOSA 5G identity. The color palette should be used consistently across all brand communications as flat colors and never a gradient. Tints of the base palette colors may be used and can be especially useful for designing information graphics, charts and tables.



3.1.3.2. Typography

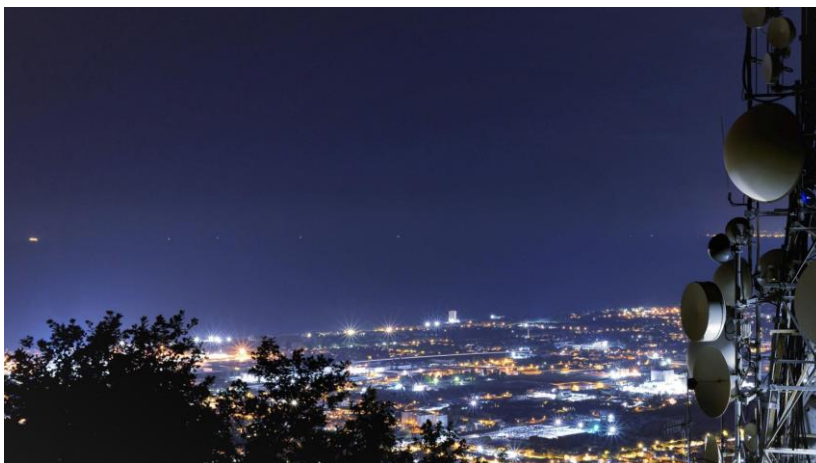
Century Gothic (used in this document, and available as standard in Microsoft Office) is the primary font for VIRTUOSA literature. The font complements the VIRTUOSA logo with the geometric forms, and the symmetry of its characters.

Fresh and modern in its look, it conveys a professional feel. The two weights; regular and bold – and the italicized versions – provide versatility of use.

3.1.3.3. Images

A photo showing a broadcast transmitter in the front and a big city at night in the back is part of the project ID. It shall be used as cover of reports, communication materials (presentations, brochure, rollup, etc.) and in social media.

Cover photo:



3.1.4. EU emblem and disclaimer

Any communication must include the EU emblem, Information on EU funding and a disclaimer that this reflects only the author's view and that the Agency and the Commission are not responsible for any use that may be made of the information it contains (see **Annex 3: EU emblem and EU disclaimer**).

3.2. Deliverable report template (Word)

A basic word template for the creation of deliverable reports is made available for download in the Project Repository (see [Annex 4: Deliverable report template \(Word\)](#)).

The EU flag, the project funding information and the disclaimer are in the footer of every page.

3.3. Project presentation (PowerPoint)

A short power point presentation (ten slides), with speaker notes, introducing the VIRTUOSA project to begin communicating about the project in business settings is made available for download (Power Point file) in the Project Repository and on the VIRTUOSA website (see [Annex 5: Project presentation \(PowerPoint\) \(no.1\)](#)).

The EU flag features prominently on every slide. The project funding information and the disclaimer are also on the title page.

3.4. Press Release

The first press release has been launched in September 2019 and is made available for download (Power Point file) in the Project Repository and on the VIRTUOSA website (see [Annex 6: Press release \(no.1\)](#)).

3.5. Newsletters

The first three newsletters have been launched in September and October 2019 and are made available for reading and sharing in the Project Repository and on the VIRTUOSA website (see [Annex 7: Newsletters \(no.1, no.2, no.3\)](#)).

Note: it is not possible to have a VIRTUOSA-specific newsletter. For that, the project would need to collect, store and process data in compliance with GDPR, which is much too complex, cumbersome and expensive in the context of this project.

Therefore, all consortium partners are encouraged to use these newsletters to promote the VIRTUOSA project via their own corporate e-newsletters.

3.6. Brochure/leaflet

First brochure has been launched in December 2019 and is made available for download (PDF file) in the Project Repository and on the VIRTUOSA website (see [Annex 8: Brochure \(no.1\)](#)) for the use at upcoming events to inform and attract potential users and customers.

3.7. Roll-up banner

First eye-catching roll-up banner is made available for download (PDF file) in the Project Repository (see [Annex 9: Roll-up banner \(no.1\)](#)) for the use at upcoming events to inform and attract potential users and customers

3.8. Videos

First video (in German) has been launched in June 2020 and is made available via Film-TV-Video (<https://www.film-tv-video.de/technology/2020/06/24/5g-virtuosa-projekt-ip-studio-laeuft/>) and You Tube (<https://www.youtube.com/watch?v=eWvGDRUclRQ>) (see **Annex 10: Videos (no.1, no.2)**).

The video lasts 2:50 minutes and describes the purpose of the project and project partners, the planned three use cases for real live testing of the VIRTUOSA innovation, and the preparation work for the first use case at IRT to attract potential users and customers.

A second video (in English) has been launched in November 2020 and is made available for watching and sharing on the VIRTUOSA website (see **Annex 10: Videos (no.1, no.2)**).

The video lasts 6:42 minutes and describes the final setup of the LAN pilot system at IRT's facilities and its benefits with interviews of all project partners (Nevion, Mellanox, LOGIC, IRT) to attract potential users and customers.



4. Communication Guide

Communication activities promoting the VIRTUOSA project and the VIRTUOSA innovation are essential for the project in general and for the commercialization success in particular.

Therefore, each consortium partner (i.e. NEVION, MLNX, LOGIC and IRT) has a dedicated effort in Work Package 4.

This Communication Guide shall support such contribution.

4.1. Internal Communication

Channel for internal communication is following email mailing list:

Partner	Person in charge	Position	Email
NEVION	Oliver Suard	VP of Marketing	OSuard@nevision.com
	Cosimo Gualano	Director of Marketing Operations	cgualano@nevision.com
MLNX	Matty Kadosh	Principal SW Architect	mattyk@mellanox.com
	Yonatan Piasetzky	Solution Architect	yonatanp@mellanox.com
LOGIC	Jessica Volk	Project Manager	jvolk@logicmedia.de
	Viviane Puffay	Marketing Manager	vpuffay@logic.tv
IRT	Ralf Neudel	General Manager Collaborative Research	neudel@irt.de
	Markus Berg	Head of Future Networks	berg@irt.de

Responsible for internal communication is VIRTUOSA's Communication and Dissemination Manger Olivier Suard from NEVION.

At least one person per Consortium partner should be dedicated as contact person for communication and dissemination activities.

All information related to communication and dissemination activities shall be reported to Olivier Suard.

4.2. Website

All Consortium partners shall follow, contribute to, and distribute the VIRTUOSA website.

Website	
VIRTUOSA Project website	http://5g-virtuosa.eu
Send your contribution to	Oliver Suard (OSuard@nevision.com)

Contributions might be news related to:

- Participation in major events, conferences, publications, awards or similar.
- Main technical achievements of the project (e.g. finalizing of prototype or pilot system)
- Invitation to own organized events (e.g., demo events)

4.3. Social Media

All Consortium partners shall follow, contribute to and distribute VIRTUOSA's social media links.

Social media	
VIRTUOSA LinkedIn account	@5G-VIRTUOSA https://www.linkedin.com/company/5g-virtuosa/
VIRTUOSA Twitter account	@5G-VIRTUOSA https://twitter.com/5g_virtuosa/

4.4. Communication materials

All communication materials are stored and available in the Project Repository.

Communication materials	
Logo Brand Guidelines Project presentation (PowerPoint) Brochure Roll-up banner Video Press Release Newsletter Deliverable report template (word) EU emblem EU disclaimer	<ul style="list-style-type: none"> • Latest version is available in the Project Repository • In addition, available as download at VIRTUOSA's website.
Obligatory in all communication materials	<ul style="list-style-type: none"> • VIRTUOSA Logo • VIRTUOSA website link • VIRTUOSA social media links (LinkedIn, Twitter) • EU emblem • Information on EU funding: <i>"This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 866656.</i> • Disclaimer: <i>This communication reflects only the author's view and the European Commission and its Agency are not responsible for any use that may be made of the information it contains."</i>

4.5. Participation in Events

A Consortium partner who plans to participate in an event with impact on VIRTUOSA shall inform VIRTUOSA's Communication and Dissemination Manager upfront and follow this instruction:

Participation in Events	
1. Before the event (at least 8 weeks)	<p>Inform about the planned event in order to prepare a communication campaign if appropriate.</p> <p>Therefore, send email to: Email to: OSuard@nevion.com Email subject: VIRTUOSA_Event participation</p>
2. During the event	<ul style="list-style-type: none"> • Take pictures promoting the VIRTUOSA project and its innovations. • Take pictures of people participating at the event.
3. After the event	<ul style="list-style-type: none"> • Add the event to the 'TABLE OF COMMUNICATION AND DISSEMINATION ACTIVITIES' (stored and available in the Project Repository). • In addition, send a brief report with a few pictures to: • Email to: OSuard@nevion.com • Email subject: VIRTUOSA_Event participation

4.6. Publications (popularized or peer-reviewed)

All Consortium partners are encouraged to propose opportunities to publish technical outcomes (e.g. articles, congress contributions).

Publications	
Any planned publication or presentation	<p>Inform about planned publications or presentations in order to proof upfront that no confidential information will be published.</p> <p>Therefore, send email to: Email to: OSuard@nevion.com Email subject: VIRTUOSA_Publications</p>

Annex 1: Logo

The logo in various formats is made available for download on the VIRTUOSA website (<http://5g-virtuosa.eu/documentation/>):

HozirontalLogo_White	
VerticalLogo_Black	
VerticalLogo_Black	

Annex 2: The Brand guidelines

The Virtuosa 5G logo is at the core of our visual identity. When using the logo there are some simple rules to follow which is made available for download (PDF file) on the VIRTUOSA website (<http://5g-virtuosa.eu/documentation/>).



5G
VIRTUOSA



VIRTUOSA **5G**

VIRTUOSA **5G**

Logo usage

The Virtuosa 5G logo is at the core of our visual identity. When using the logo there are some simple rules to follow.

The Virtuosa 5G logo should appear either in black or white out.

The logo should only be reproduced from master artworks and should not be redrawn or altered in any way.



Exclusion zone

To protect the integrity of our logo an exclusion area ensuring adequate clear space around it is essential. For the vertical logo the clear space top and bottom is equivalent to 11/2 x the height of the letter T and left and right is 1x the height of the T. For the horizontal version the clear space is 1 x the height of the T to all sides.. This is the minimum space allowed around the logo and no other elements should fall within this area when used in any design.

This area is a minimum and should be increased wherever possible.

Colour palette

Pantone Black 6 C 100 M 79 Y 44 K 93 R 16 G 24 B 32 #101820	Pantone 2161 C 93 M 55 Y 16 K 25 R 40 G 87 B 128 #285780	Pantone 7696 C 56 M 9 Y 9 K 21 R 99 G 153 B 174 #6399AE	Pantone 7407 C 6 M 36 Y 79 K 12 R 203 G 160 B 82 #CBA052	Pantone 429 C 21 M 11 Y 9 K 23 R 162 G 170 B 173 #A2AAAD	Pantone 427 C 7 M 3 Y 5 K 8 R 208 G 211 B 212 #D0D3D4

The Virtuosa 5G colour palette

The corporate primary colours provide a definite, solid and professional base for the Virtuosa 5G identity. The colour palette should be used consistently across all brand communications as flat colours and never a gradient. Tints of the base palette colours may be used and can be especially useful for designing information graphics, charts and tables.

Typography

Century Gothic Regular
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
1234567890!@£\$%^&*()

Century Gothic Italic
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
1234567890!@£\$%^&()*

Century Gothic Bold
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
1234567890!@£\$%^&*()

Century Gothic Bold Italic
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
1234567890!@£\$%^&*()

Typography

Primary typeface

Century Gothic is the primary font for Virtuos 5G literature. The font complements the Virtuos 5G logo with the geometric forms, and the symmetry of its characters.

Fresh and modern in its look, it conveys a professional feel. The two weights; regular and bold – and the italicised versions – provide versatility of use.





If you have any questions or require any clarification on the contents of these guidelines, please contact the Marketing Department by email.

Olivier Suard
Email: osuard@nevion.com



Annex 3: EU emblem and EU disclaimer

1. EU emblem

EU emblem:



2. Information on EU funding:

Display the EU emblem and include the following sentence to all publications and to the web site and social media:

"This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 866656".

Display the EU emblem and include the following sentence to all major results (e.g. prototypes):

"This [infrastructure][equipment][insert type of result] is part of a project that has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 866656".

3. Disclaimer excluding Agency and Commissions responsibility:

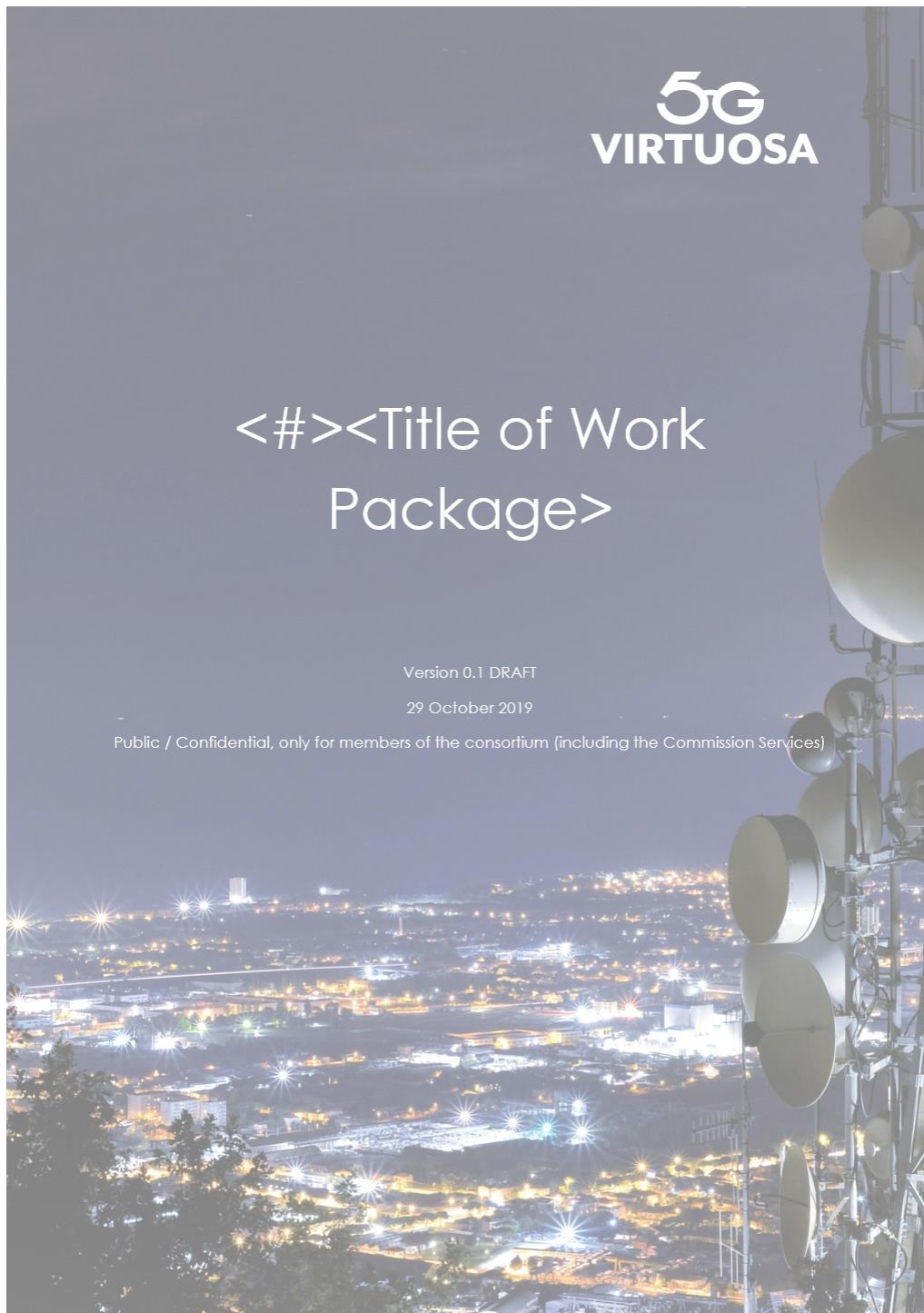
Any communication must indicate:

"This reflects only the author's view and that the Agency and the Commission are not responsible for any use that may be made of the information it contains. "



Annex 4: Deliverable report template (Word)

A basic word template for the creation of deliverable reports is made available for download on the VIRTUOSA website (<http://5g-virtuosa.eu/documentation/>):





Grant Agreement No.: 866656

Project Acronym VIRTUOSA

Project Title Scalable Software Defined Network Architectures for Cooperative LIVE Media Production exploiting Virtualised Production Resources and 5G Wireless Acquisition

Project Start Date (and Duration) 1 September 2019 (24 months)



Work Package <#><Title of Work Package>

Due Delivery Date 1 November 2019

Actual Delivery Date 29 October 2019

Lead Participant for this Deliverable Nevion AS (NEVION)
Mellanox Technologies LTD (MLNX)
LOGIC media solutions GmbH (LOGIC)
Institut für Rundfunktechnik GmbH (IRT)

Lead Responsible <name of person>

Dissemination level Public / Confidential, only for members of the consortium (including the Commission Services)

Status Version 0.1 DRAFT

History of changes		
Version	Date	Change
0.1	1 September 2019	

|

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(including the Commission Services)

2 of 5



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(including the Commission Services)

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Public

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1. Executive summary

The purpose of this document is

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4 of 5



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Public

25 of 53



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2. Document heading 1

2.1. Document heading 2

2.1.1. Document heading 3

Abc

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5 of 5



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Public

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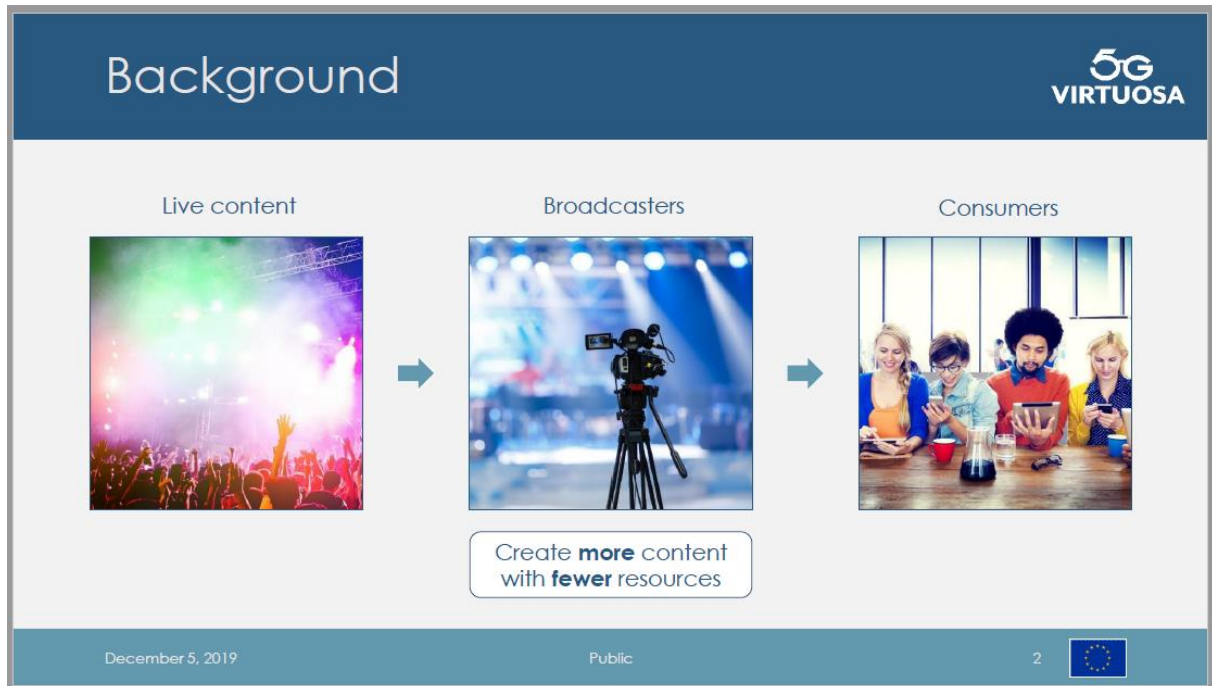


This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 866656. This document reflects only the author's view and the European Commission and the Agency are not responsible for any use that may be made of the information it contains.

Annex 5: Project Presentation (PowerPoint) (no.1)

A short power point presentation (ten slides), with speaker notes, introducing the VIRTUOSA project is made available for download (Power Point file) on the VIRTUOSA website (<http://5g-virtuosa.eu/documentation/>):

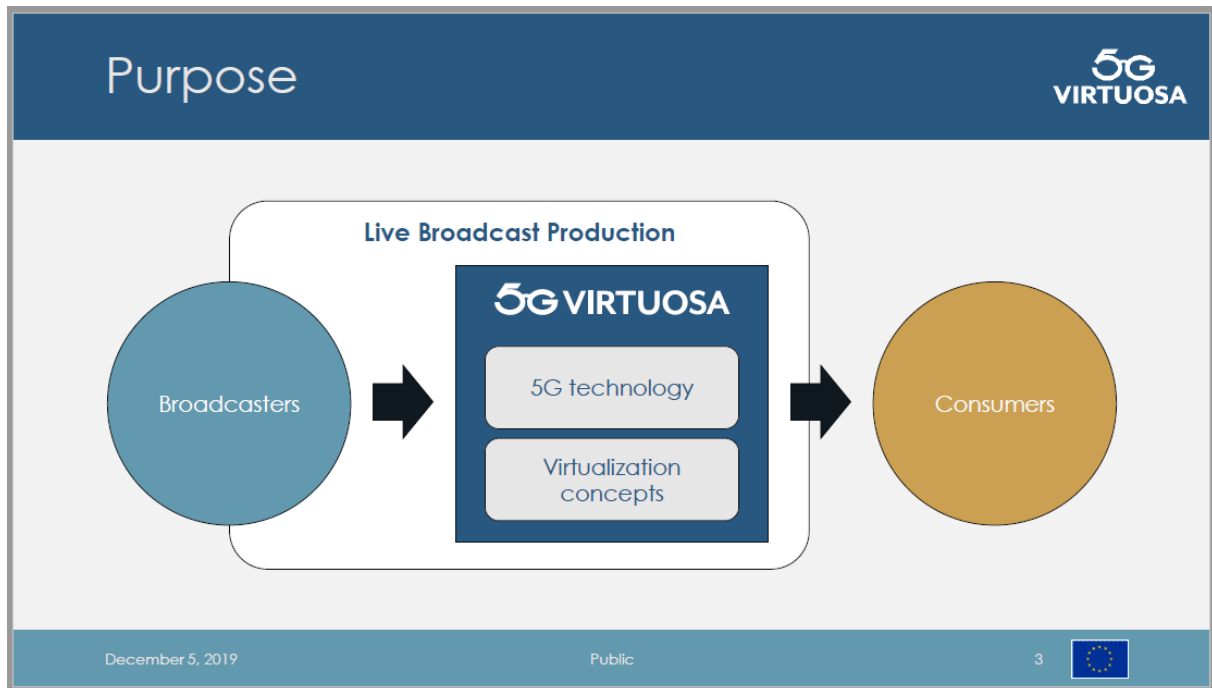




Speaker note:

The Media & Entertainment (M&E) industry has been undergoing fundamental changes in recent years, largely as a result of the change in the viewing habits of consumers who now have a huge the choice for entertainment.

In this highly competitive environment, broadcasters and content producers must meet growing consumer demand for ever more engaging content, in particular by using more live sources and trying to get live feedback from the audience straight into the production chain. The big challenge for them is that they need to produce more content, at time when they have less time and fewer resources to do so, in many cases using a network infrastructure based on technology (SDI - Serial Digital Interface) that is 30 years old and not suited for the Internet and mobile age.



Speaker note:

The purpose of the EU project VIRTUOSA is to explore through real-life examples how 5G wireless communication can be combined with virtualization concepts from the IT industry to enable broadcasters to produce live content (such as sports or music coverage) more efficiently and cost-effectively across locations, to meet growing consumer demand.

Official title



Scalable Software Defined Network Architectures
for Cooperative LIVE Media Production
exploiting Virtualized Production Resources
and 5G Wireless Acquisition

December 5, 2019

Public

4



Speaker note:

The official title of the VIRTUOSA project is:

Scalable Software Defined Network Architectures for Cooperative LIVE Media Production exploiting Virtualized Production Resources and 5G Wireless Acquisition





Speaker note:

The VIRTUOSA project is run by a consortium of 4 organizations:

- **Nevion AS (Norway)** - Nevion provides media network and broadcast infrastructure solutions to broadcasters, telecommunication service providers, government agencies and other industries.
- **Mellanox Technologies LTD (Israel)** - Mellanox Technologies is a leading supplier of end-to-end Ethernet and InfiniBand intelligent interconnect solutions and services for servers, storage, and hyper-converged infrastructure.
- **LOGIC media solutions GmbH (Germany)** - LOGIC is a German-based media infrastructure architect and distributor of professional broadcast and telecommunication equipment.
- **Institut für Rundfunktechnik GmbH (Germany)** - The IRT is a world-renowned research and innovation center for broadcasting and media technology with more than 60 years of experience.

EU funding





€ 2 million funding from the
European Union's Horizon 2020
research and innovation program
under grant agreement No 866656.

December 5, 2019

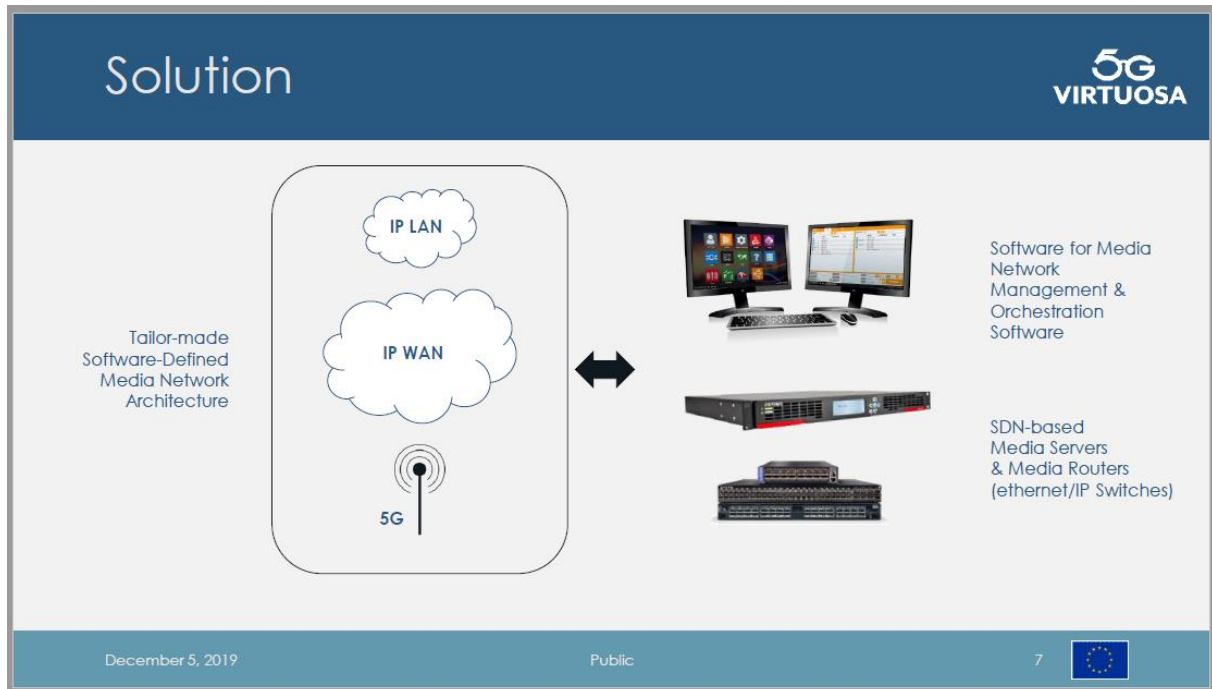
Public

6 

Speaker note:

The VIRTUOSA project has received € 2 million funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 866656.



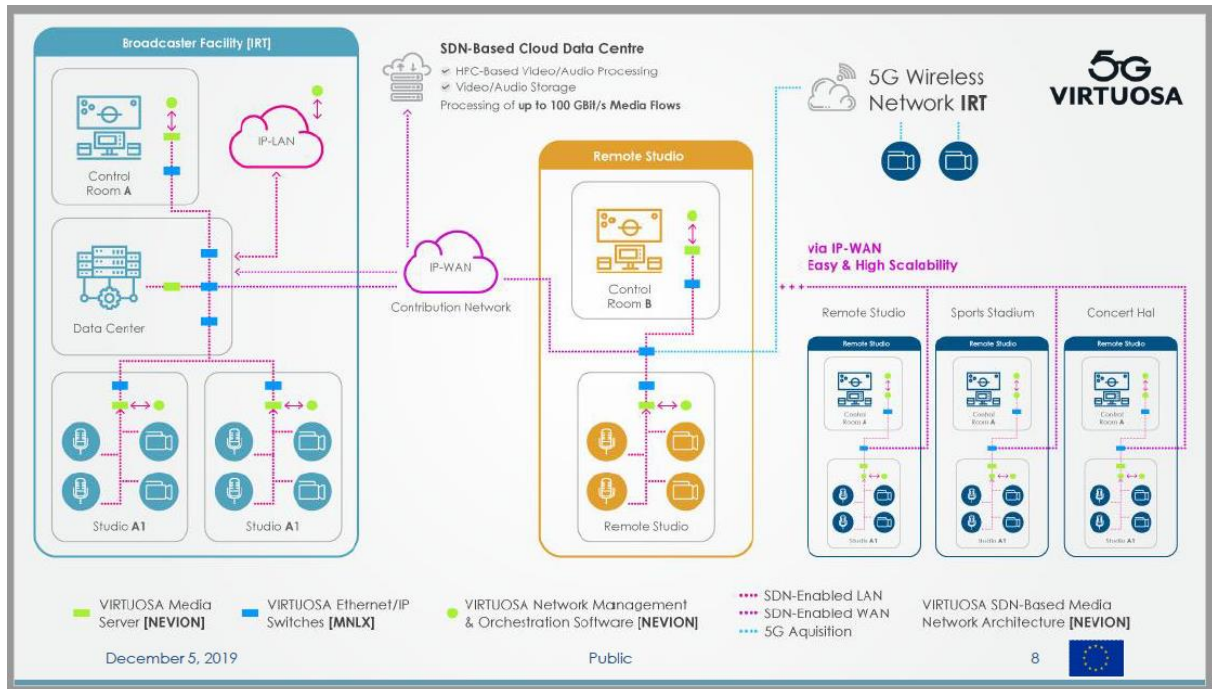


Speaker note:

The overall objective of the 24-month VIRTUOSA project is to create a market ready product - the VIRTUOSA product (or solution) - fully tested technically, validated in a real operational environment.

The product itself will be based on three core technical elements:

- Architecture: a tailor-made architecture solution for SDN-based LAN & WAN and 5G acquisition
- Equipment: high performance SDN-based media servers and media routers (Ethernet/IP switches)
- Software: media network management and self-service orchestration.



Speaker note:

The plan for project VIRTUOSA is to build a real-life live production set-up combining broadcast facilities and remote studios connected by IP networks (both LAN and WAN), combined with remote live contributions from cameras connected via a 5G network.

The solution will involve products from Nevion and Mellanox, as well as 3rd party equipment from various companies, sourced by IRT and LOGIC media.

5G
VIRTUOSA

5G
VIRTUOSA

=

1

+

2

+

4

+

24

Project

€ million
EU funding

Participants


Months

= Revolutionizing live broadcast production!

December 5, 2019

Public

9



5G
VIRTUOSA


Thank you!

info@5g-virtuosa.eu

December 5, 2019

Public

10





Annex 6: Press release (no.1)

The first press release has been launched in September 2019 and is made available for download (Power Point file) on the VIRTUOSA website (<http://5g-virtuosa.eu/documentation/>):



Press release no.1, 9 SEP 2019:



Press Release

Nevion-led consortium receives 2 million euro EU funding for 5G broadcast remote production project

***Grant provided under European Union's Horizon 2020 program - Fast
Track to Innovation***

Oslo, Norway, 10 September 2019 – Nevion, award-winning provider of virtualized media production solutions, announced today that a mobile-5G remote production project by a consortium it is leading has received a grant of €2 million from the European Union's Horizon 2020 research and innovation program 'Fast Track to Innovation'. Project "VIRTUOSA" was selected as the best proposal of a highly competitive call with 225 applications.

The winning consortium comprises four international leading industry players with complementary competences and a common goal to bring 5G (the Fifth Generation of Cellular Network Technology) Broadcast Remote Production solutions to market: Nevion AS (Norway), Mellanox Technologies LTD (Israel), LOGIC media solutions GmbH (Germany) and IRT – Institute for Broadcasting Technology (Germany).

The purpose of the EU project VIRTUOSA is to explore "*Scalable Software Defined Network Architectures for Cooperative Live Media Production exploiting Virtualized Production Resources and 5G Wireless Acquisition*". In practical terms, this means demonstrating through real-life examples how 5G can be combined with virtualization concepts to enable broadcasters to produce live content (such as sports or music coverage) more efficiently and cost-effectively across locations, to meet growing consumer demand.

VIRTUOSA Project Coordinator Thomas Heinzer, EVP Strategic Projects, Nevion, commented: "We at Nevion are honored by the European Commission's acknowledgement of our VIRTUOSA EU project. After being at the forefront of the professional media industry's move to IP for more than a decade, we look forward to working together with our consortium partners to take our proven SDN technology to the next level by leveraging the capabilities of 5G for live production."

Nevion's SDN technology provides the means to control media networks more effectively in order to achieve the defined and predictable reliability and performance required for the transport of video, audio and associated data used in live broadcast production.





This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 866656.

About Mellanox Technologies

Mellanox Technologies (NASDAQ: MLNX) is a leading supplier of end-to-end Ethernet and InfiniBand intelligent interconnect solutions and services for servers, storage, and hyper-converged infrastructure. Mellanox intelligent interconnect solutions increase data center efficiency by providing the highest throughput and lowest latency, delivering data faster to applications and unlocking system performance. Mellanox offers a choice of high-performance solutions: network and multicore processors, network adapters, switches, cables, software and silicon, that accelerate application runtime and maximize business results for a wide range of markets including high performance computing, enterprise data centers, Web 2.0, cloud, storage, network security, telecom and financial services. More information is available at: www.mellanox.com

About LOGIC media solutions GmbH

LOGIC is a German-based media infrastructure architect and distributor of professional broadcast and telecommunication equipment. Almost 20 years of experience on the market and excellent connections to the German media companies makes LOGIC one of the leading value-added reseller not only in regards to IP based productions. Solutions based on traditional SDI technology as well as services within the cloud can be covered with the portfolio and team LOGIC provides to their customers. For more information please visit www.logicmedia.de

About Institut für Rundfunktechnik GmbH (IRT) -Institute for Broadcasting Technology

With more than 60 years of experience, the IRT is a world-renowned research and innovation center for broadcasting and media technology. It observes, evaluates and develops new technologies in the digital audiovisual media with the aim of strategically adapting the idea of broadcasting to new market environments. Around 100 employees conduct research in Munich in close cooperation with shareholders and clients for innovative solutions in the fields of Next Generation Audio, Future Video, Artificial Intelligence, Metadata, All IP / IT, IP Distribution, Portals and Services, Accessibility and 5G. Its shareholders are the broadcasters ARD, ZDF, Deutschlandradio, ORF and SRG / SSR. In addition, the IRT works together with a large number of customers from the broadcasting, media and industry sectors. The cooperation with international research partners offers access to worldwide trends and developments. In cooperation with universities, the IRT promotes the training of junior staff. More information is available at: <https://www.irt.de/home/>

About Nevion

As the architect of virtualized media production, Nevion provides media network and broadcast infrastructure solutions to broadcasters, telecommunication service providers, government agencies and other industries. Increasingly based on IP, virtualization and Cloud technology, Nevion's solutions enable the management, transport and processing of professional-quality video, audio and data – in real time, reliably and securely. From content production to distribution, Nevion solutions are used to power major sporting





Press Release

and live events across the globe. Some of the world's largest media groups and telecom service providers use Nevion technology, including AT&T, NBC Universal, Sinclair Broadcast Group Inc., NASA, Arqiva, BBC, CCTV, EBU, BT, TDF and Telefonica.

For more information please visit www.nevion.com. Follow Nevion on Twitter @nevioncorp

Media Contacts

Media contacts: Olivier Suard, VP Marketing, Nevion

T: +47 22 88 97 50

E: osuard@nevion.com



Annex 7: Newsletters (no.1, no.2, no.3)

The first three newsletters have been launched in September and October, 2019 and are made available for reading and sharing on the VIRTUOSA website (<http://5g-virtuosa.eu/news/>):



All

Events

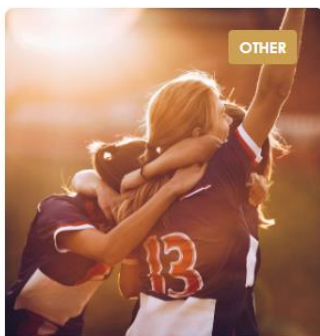
Other

Press



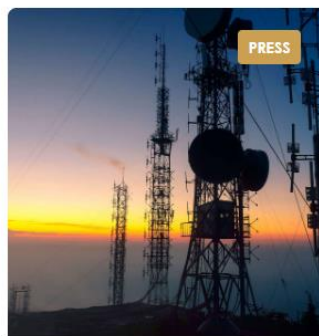
OTHER

31 Oct 2019

**Project documents
uploaded**

OTHER

31 Oct 2019

**Website and Social
media Launch**

PRESS

10 Sep 2019

**Nevion-led consortium
receives 2 million
euros**

News no.1, 10 SEP 2019:



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Nevion-led consortium receives 2 million euro EU funding for 5G broadcast remote production project

Oslo, Norway, 10 September 2019 – **Nevion**, award-winning provider of virtualized media production solutions, announced today that a mobile-5G remote production project by a consortium it is leading has received a grant of €2 million from the European Union's Horizon 2020 research and innovation program 'Fast Track to Innovation'. Project "VIRTUOSA" was selected as the best proposal of a highly competitive call with 225 applications.

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Nevion's SDN technology provides the means to control media networks more effectively in order to achieve the defined and predictable reliability and performance required for the transport of video, audio and associated data used in live broadcast production.

Attachments



Press Release

Nevion-led consortium receives 2 million euro
EU funding for 5G broadcast remote production project

[Download](#)

News no.2, 31 OCT 2019:



Website and Social media Launch

The VIRTUOSA project is proud to launch its website on October 31, 2019 – in line with the project plan. At the same time, VIRTUOSA is also launching its social media presence on Twitter and LinkedIn.

The purpose of the website and the social media is to keep interested parties informed of the progress of the project. These parties include of course the broadcast and telecom industry, that are set to benefit from the work of the project, but also any member of the public with an interest in the type of businesses and technology involved.

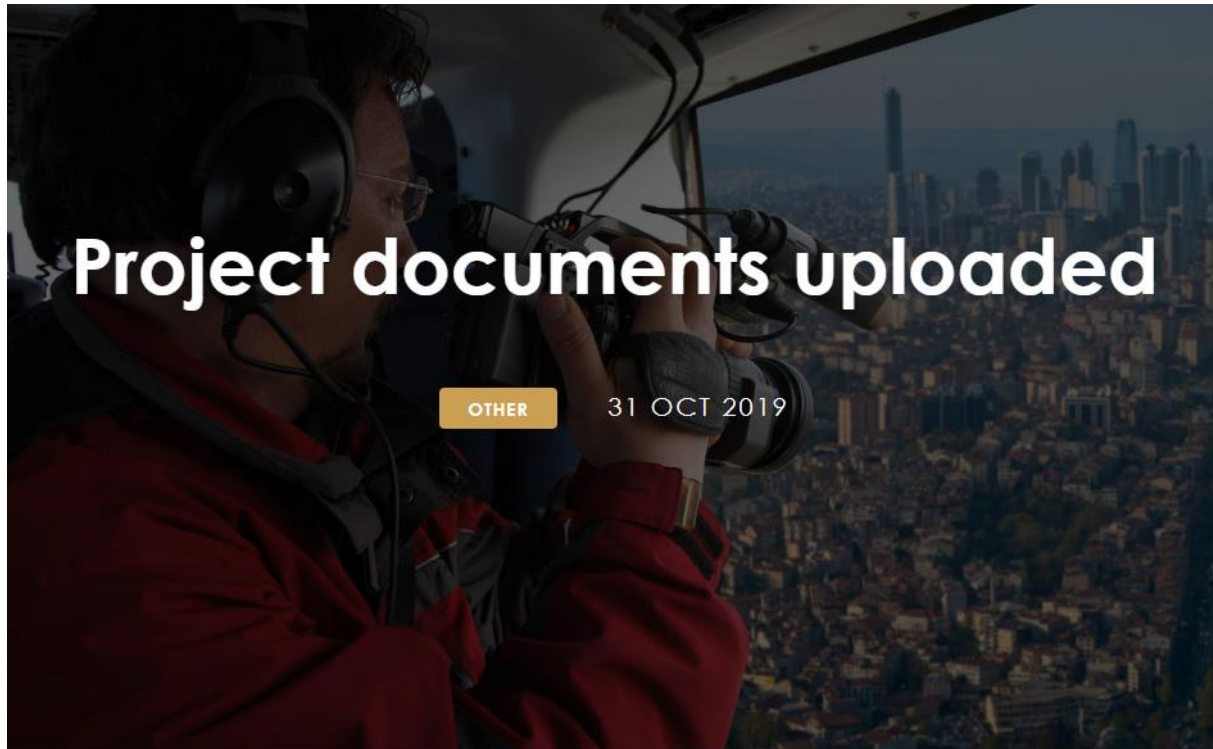
The aim is to keep content as easy as possible to read.

Clearly though, this is a complex project involving advanced technology, so inevitably some information will be technical in nature.

Make sure you bookmark the website and follow VIRTUOSA on social media (see links at the bottom of this page) to stay up to date with the exciting developments of the project.

If you have any questions, don't hesitate to **contact us** .

News no.3, 31 OCT 2019:



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Project documents uploaded

As part of the VIRTUOSA project, documents will be regularly uploaded to the Document section of this website. At the time of launch, we are providing information about the VIRTUOSA brand, as well as a short PowerPoint presentation explaining the project in simple terms. The presentation includes speaker notes.

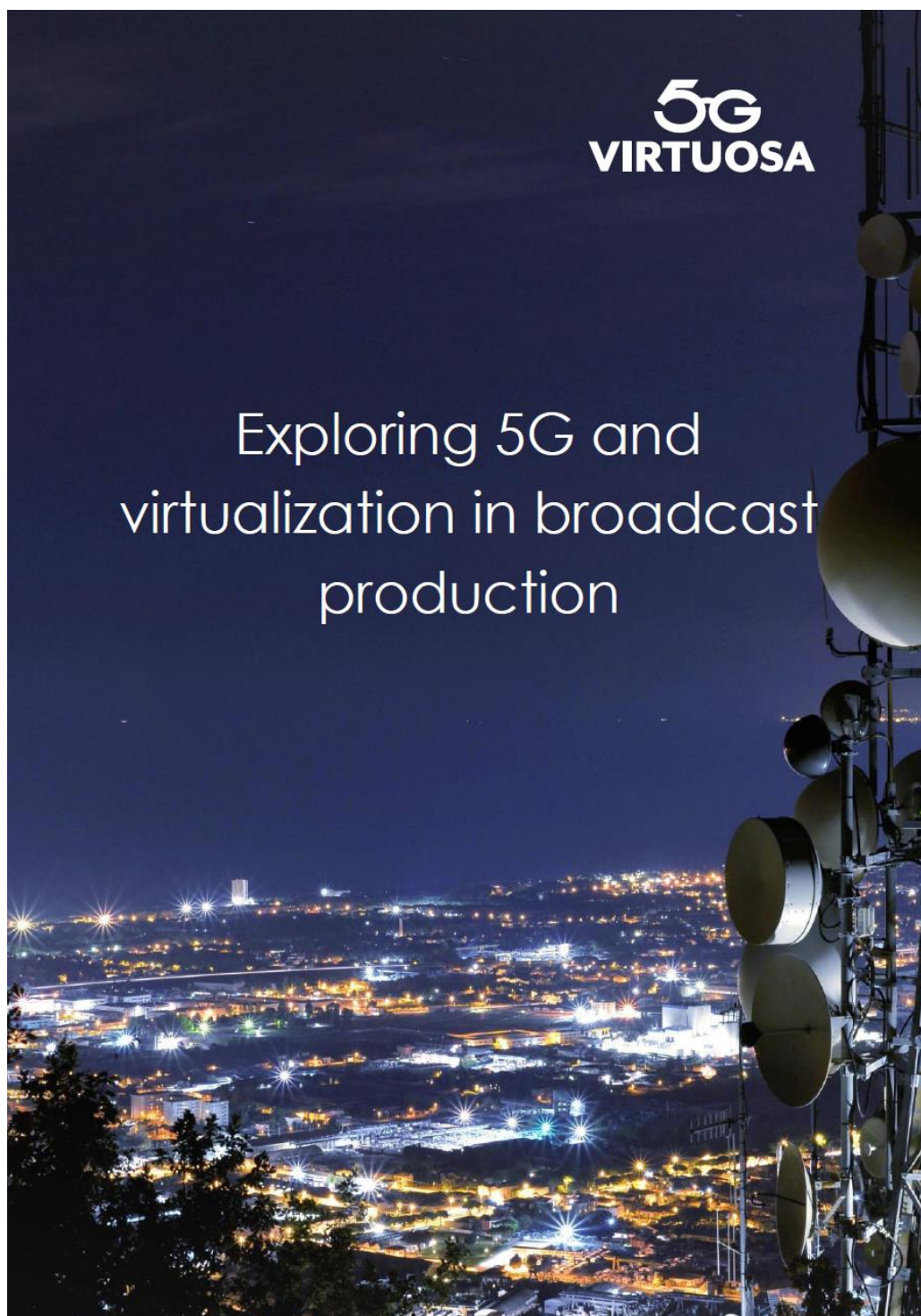
Check out the [Documentation page!](#)

NB: The VIRTUOSA presentation represents the views of the project participants, view and the European Commission is not responsible for any use that may be made of the information it contains.

Annex 8: Brochure (no.1)

The first brochure has been launched in December 2019 and is made available for download (PDF file) on the VIRTUOSA website (<http://5g-virtuosa.eu/documentation/>).

Brochure no.1, DEC 2019:



Background

The Media & Entertainment (M&E) industry has been undergoing fundamental changes in recent years, largely as a result of the change in the viewing habits of consumers who now have a huge choice for entertainment.

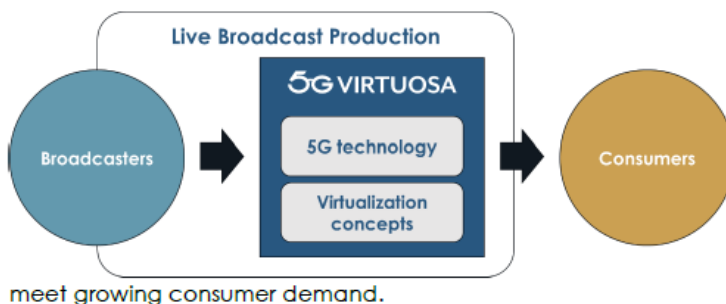
In this highly competitive environment, broadcasters and content producers must meet growing consumer demand for ever more engaging content, in particular by using more live sources and trying to get live feedback from the audience straight into the production chain. The big challenge for them is that they need to produce more content, at a time when they have less time and fewer resources to do so, in many cases using a network infrastructure based on technology (SDI - Serial Digital Interface) that is 30 years old and not suited for the Internet and mobile age.

Purpose

The official title of the EU project VIRTUOSA is:

"Scalable Software Defined Network Architectures for Cooperative LIVE Media Production exploiting Virtualized Production Resources and 5G Wireless Acquisition"

The purpose of the project is to explore real-life examples of how 5G wireless communication can be combined with virtualization concepts from the IT industry to enable broadcasters to produce live content (such as sports or music coverage) more efficiently and cost-effectively across locations, to



meet growing consumer demand.

Participants

The VIRTUOSA project is run by a consortium of 4 organizations.



Nevion AS (Norway) - Nevion provides media network and broadcast infrastructure solutions to broadcasters, telecommunication service providers, government agencies and other industries.



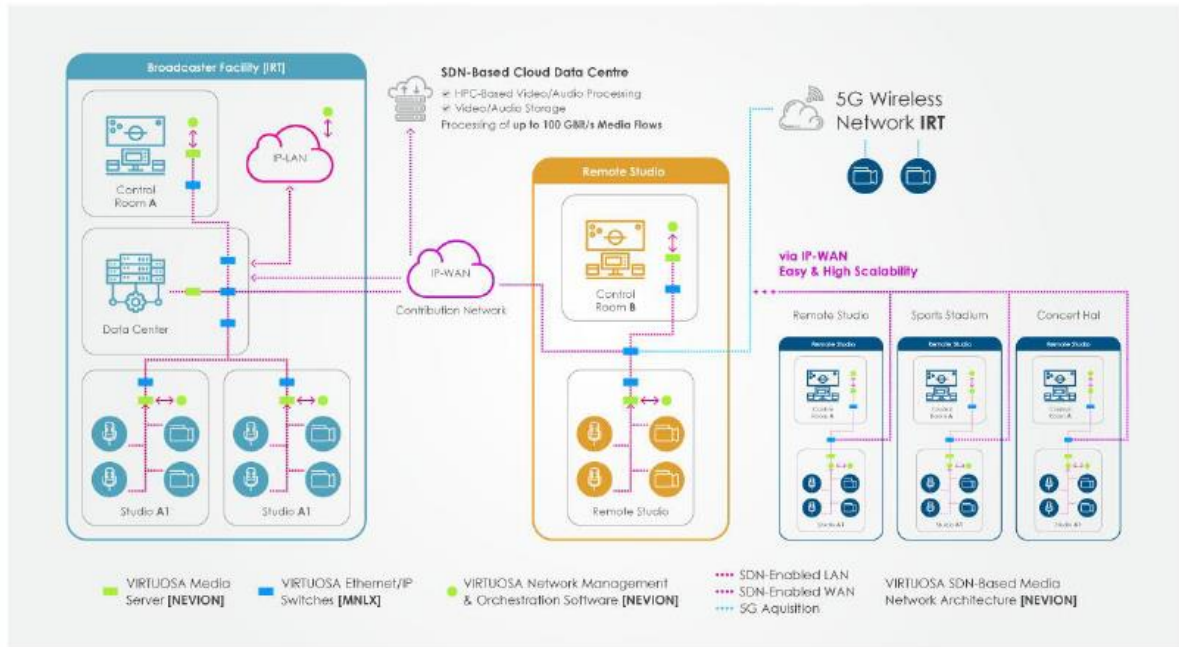
Mellanox Technologies LTD (Israel) - Mellanox Technologies is a leading supplier of end-to-end Ethernet and InfiniBand intelligent interconnect solutions and services for servers, storage, and hyper-converged infrastructure.



LOGIC media solutions GmbH (Germany) - LOGIC is a German-based media infrastructure architect and distributor of professional broadcast and telecommunication equipment.



Institut für Rundfunktechnik GmbH (Germany) - The IRT is a world-renowned research and innovation center for broadcasting and media technology with more than 60 years of experience.



Solution

The overall objective of the 24-month VIRTUOSA project is to create a market ready product - the VIRTUOSA product (or solution) - fully tested technically, validated in a real operational environment.

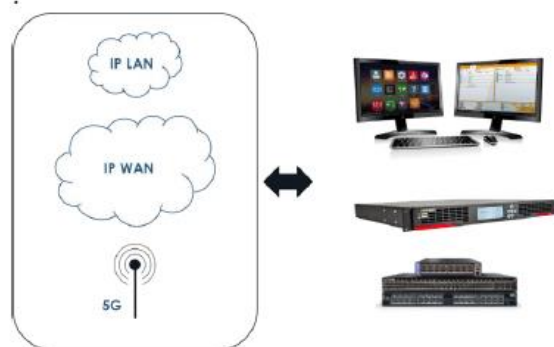
The product itself will be based on three core technical elements:

- Architecture: a tailor-made architecture solution for SDN-based LAN & WAN and 5G acquisition
- Equipment: high performance SDN-based media servers and media routers (Ethernet/IP switches)
- Software: media network management and self-service orchestration.

The plan for project VIRTUOSA is to build a real-life live production set-up combining broadcast facilities and remote studios connected by IP networks (both LAN and WAN), combined with

remote live contributions from cameras connected via a 5G network.

The solution will involve products from Nevion and Mellanox, as well as 3rd party equipment from various companies, sourced by IRT and LOGIC media.





www.5g-virtuosa.eu

Info@5g-virtuosa.eu



This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 866656. This document reflects only the author's view and the European Commission is not responsible for any use that may be made of the information it contains.

© COPYRIGHT 2019 VIRTUOSA



Annex 9: Roll-up banner (no.1)

The first roll-up banner has been launched in December 2019 and is made available for download (PDF file) in the Project Respiratory.

Roll-up banner no.1, DEC 2019:

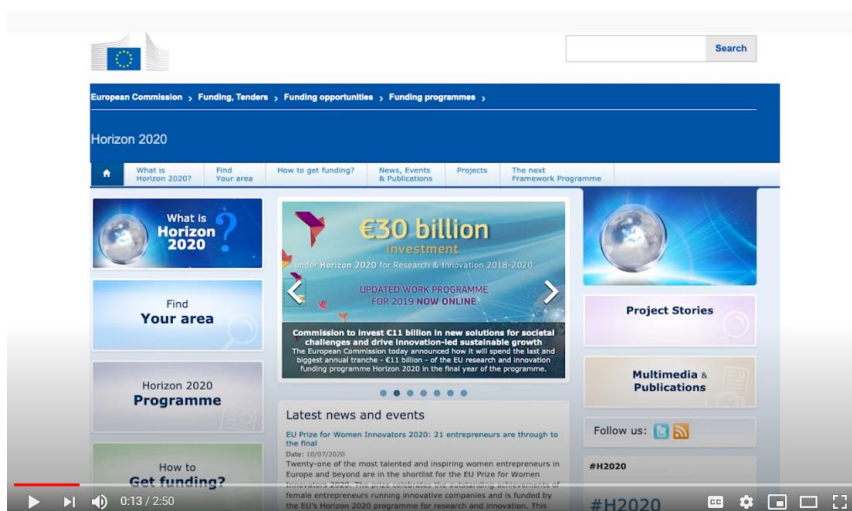
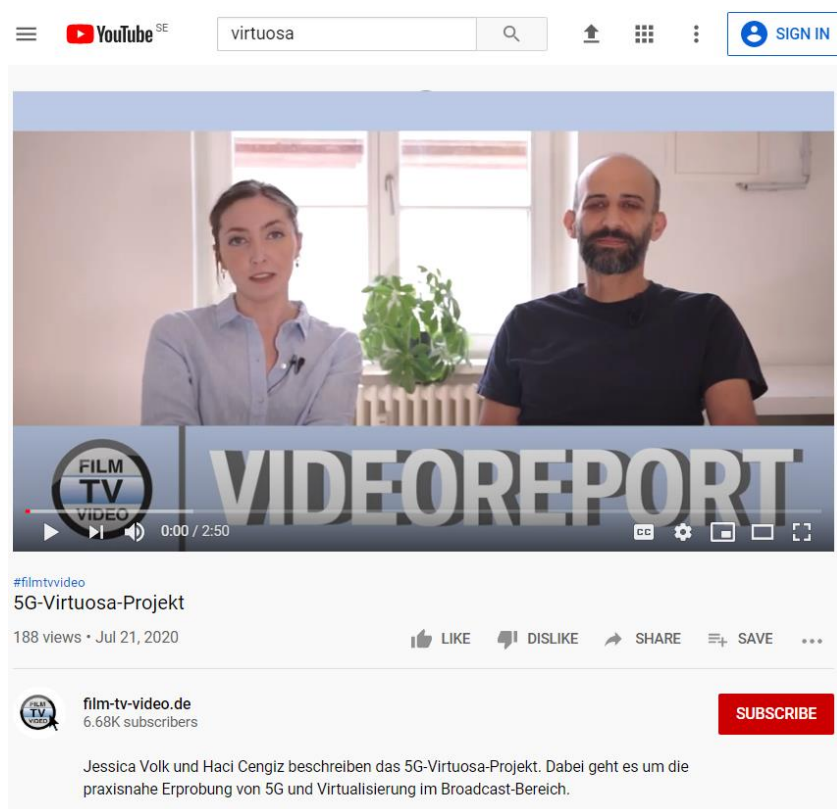


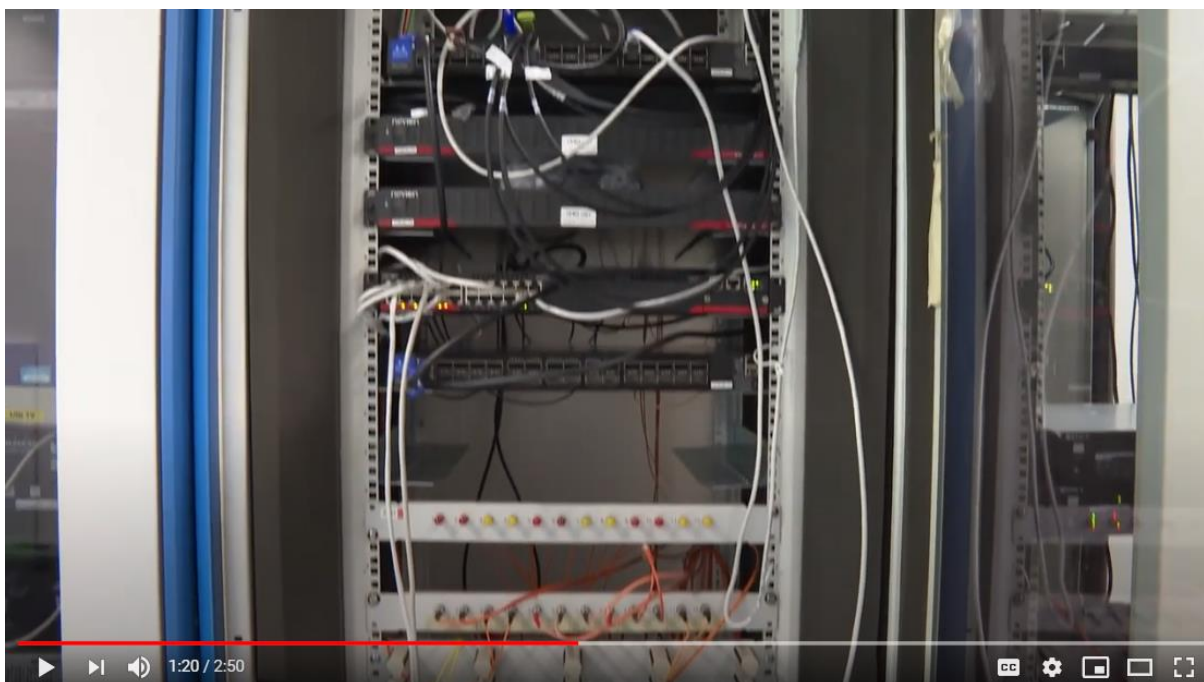
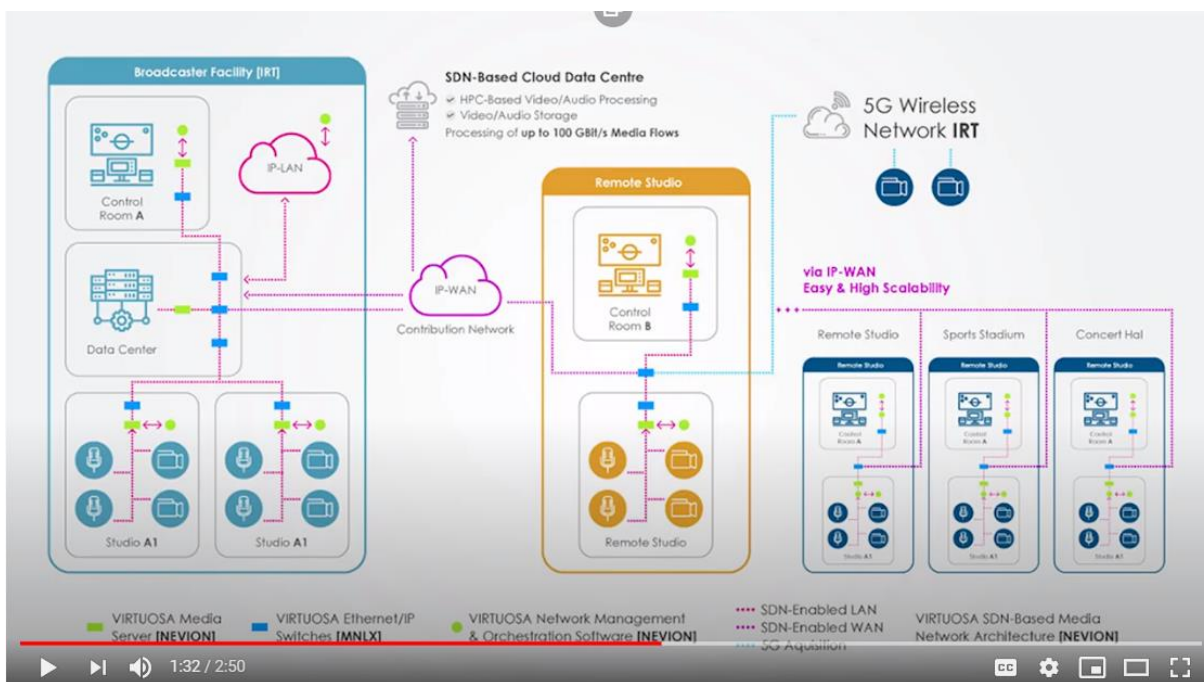
Annex 10: Videos (no.1, no.2)

Video no.1, JUN 2020 – The 5G-VIRTUOSA project:

First video (in German) has been launched in June 2020 and is made available via:

- YouTube: <https://www.youtube.com/watch?v=eWvGDRUcIRQ>
- Film-TV-Video: <https://www.film-tv-video.de/technology/2020/06/24/5g-virtuosa-projekt-ip-studio-laeuft/>





Video no. 2, NOV 2020 – IP-based studio set-up for broadcast facilities (Phase 1):

Video no.2 (in English) has been launched in November 2020 and is made available via:

- 5G-VIRTUOSA website: <https://5g-virtuosa.eu/5g-virtuosa-phase-1-video/>.



