



NEM SRIA 2020

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The NEM Strategic Research and Innovation Agenda 2020 has been approved by NEM members.

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interests of the community in terms of collaborative research for the period 2021-2027, based on the community targets towards year 2030 set in the recently issued **NEM Vision 2030** (see below).

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NEM Vision 2030

(April 2020)

Media and Creative and Cultural industries have always been a strong and independent sector of significant value in Europe, based on our cultural heritage and values, combining the power of the private initiative and governmental actions for the good of the people. Currently the media ecosystem has grown in the international context, characterized by global players, business activities and market



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....contains a set of relevant research and innovation topics considered by the NEM community as key topics to be taken into account by the European Commission in the definition of the next Horizon programme. These topics represent the interests of the community in terms of collaborative research for the period 2021-2027. In particular, thirteen topics have been elaborated and organised under **four different categories: Future Media Formats, Future Media Networks, AI for Media and Content and Future Media Applications and Challenges.**

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Each topic is self-contained in a category subsection and follows the same structure as current topic descriptions in H2020 calls: **specific challenge, scope, expected impact and implementation.**

1.Future Media Formats

In a networked media context, the visual content is at the core.

Volumetric capture and rendering will provide for unprecedented immersion and interactivity.

Challenging transition, from Video to Point Clouds, to Lightfields

1. Future Media Formats

1.1 5D Light Field Video

Pipeline for capturing, representation, processing, encoding, storing, distributing and rendering of light field video content.

1.2 Volumetric Media

Encompassing the various forms of volumetric media (e.g. light-fields, multi-view video, explicit geometric representations), in particular for human representation.

2. Smart Media Networks

To design and deploy a scalable, robust, secured, distributed, high-performance, energy-efficient and environment-neutral ubiquitous digital infrastructure, providing also next-generation network based media services for processing, orchestration, synchronization, delivery and display.

2. Smart Media Networks

2.1 5G and Future Networks for content creation and distribution ATAWAD, including coding/decoding.

5G and beyond, Media is by definition the vast majority of the data carried through communication networks. Stronger efforts for the development of the media&content network slices. Smart media pipelines along smart networks are needed to encompass the media (r?)evolution ahead.

2.2 Personal and Usage Data Management and Exploitation for Media

In a context of exponential growth of personal data and its uncontrolled use, the development of trusted European data sharing frameworks is key.

2. Smart Media Networks

2.3 Network Based Media Services

Smart media pipelines grounded on networked processing. Orchestration of deployable and distributed media processes. Moving heavy processing to the network enabling future media/video/XR applications

2.4 Energy optimization for content creation, transmission, processing and storage

In a context of exponential growth of storage, computation and communication needs, more concrete efforts towards optimization of energy consumption become a must. Smart networking of media processes for mobile services.

2. Smart Media Networks

2.5 Cybersecurity

Conventional perimeter cybersecurity solutions are no longer considered sufficient in highly complex, dynamic and contextual networks for media and content. This topic encompasses various security-related objectives, among others:

- secured and reliable content transport
- new modes of WEb and Email security
- service trustworthiness
- user data control and awareness

3. AI for Media and Content

As AI algorithms evolve and computational capacity grows, bigger and new problems can be addressed. Services like automatic content generation, translation, accessibility or description, powerful search engines over richer semantics, conversational bots and others will be more common.

3. AI for Media and Content

3.1 Artificial Intelligence and Content

Content description, natural language bots, content generation and user profiling.

3.2 Artificial Intelligence and Hyper-Personalisation for Media Access Services

Machine translation, Speech to text (ST), text to SL, SL to text and others.

4. Future Media Applications and Challenges

Media technology is not conceived as a specific sector specific but is more a technology enabler serving future innovative applications.

NEM strongly supports the participation of media stakeholders in multi-disciplinary projects to elaborate and experiment with media services and technology in key industrial sectors.

4. Future Media Applications and Challenges

4.1 **New European converged and social media technologies for other vertical sectors**

Applying media technology (e.g. XR) in verticals beyond CCI like Transport, eHealth, Automotive, Energy, Factories of the Future, etc.

4.2 **Social eXtended Reality**

Leverage future media formats and smart network for human-to-human communication and collaboration in mixed and virtual reality environments. Enable holoconferencing, XR meetings, distance training

4. Future Media Applications and Challenges

4.3 UX: Immersive and Interactive technologies for content and creation

Further development of XR enablers to achieve natural vision and interaction through new interfaces.

4.4 Disinformation

To analyse current and future potential impact of disinformation. To develop methodologies, systems and social behaviours to mitigate the potential negative impacts.



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NEM Vision 2030

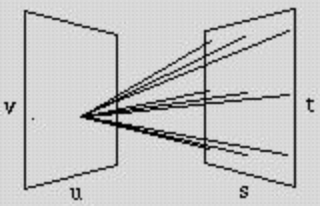
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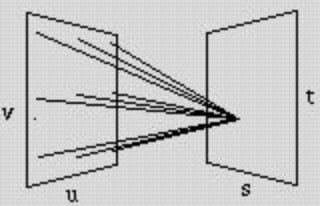


END OF PRESENTATION

Thank you!



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