

# W3C媒体与娱乐兴趣组工作状态

## Working status of Media and Entertainment Interest Group

# 媒体与娱乐兴趣组的目标和范围

## The goals and scope of MEIG

媒体与娱乐兴趣组(前称Web和TV兴趣组)，是提供媒体技术相关讨论社区用于跟踪W3C的音视频

在Web应用领域进展。

- 由媒体与音视频服务企业作为成员组成。
  - 定义Web上的音视频业务场景和技术需求。
- 《媒体与娱乐兴趣组章程》

The mission of the Media and Entertainment Interest Group, formerly known as the Web and TV Interest Group, is to provide a forum for media-related technical discussions to track progress of media features on the Web within W3C groups and use of Web technologies by external organizations, and to identify use cases and requirements that existing and/or new specifications need to meet to achieve a tighter support of media services on the Web.

- 《Media and Entertainment Interest Group Charter》

# 媒体与娱乐工作组的目标和范围(筹备中)

## The mission of Media Working Group(Proposed)

- 对Web上的媒体技术进行标准化工作。
- Standardization efforts to develop media foundations for the Web
- 计划中正式推出的标准规范

### □ **Media Capabilities**

这个新的规范提供了API，允许网站在为用户选择媒体内容时做出最佳决策。API公开了有关给定格式的解码和编码功能的信息，还公开了基于设备显示来查找最佳匹配的输出功能。

### □ **Picture-in-Picture**

新规范定义了API，允许网站始终在其他窗口之上创建浮动视频窗口，以使用户在与设备上的其他内容网站或应用程序交互时继续使用视频媒体。

### □ **Media Session**

此新规范使Web开发人员能够在平台UI上显示自定义的媒体元数据、自定义可用的平台媒体控件以及访问平台媒体密钥，如键盘上的硬件密钥、耳机、遥控器以及通知区域和移动设备锁屏上的软件密钥。

### □ **Media Playback Quality**

这个新的规范扩展了在HTML中定义的媒体播放接口，以添加可用于检测用户感知的播放质量的新功能。

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## The mission of Media Working Group(Proposed)

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- **Autoplay Policy Detection**

- 这个新的规范提供了API，允许网站确定文档级的自动播放策略，以及页面中给定媒体元素的自动播放是否成功。

- **Media Source Extensions**

- 此规范扩展了HTML中定义的HTMLMediaElement接口，以允许js生成用于播放的媒体流。此修订版更新了W3C的建议，以解决规范中的一般维护问题，并添加了在Web平台孵化器社区组中孵化的编解码器切换功能。

- **Encrypted Media Extensions**

- 此现有规范扩展了HTML中定义的HTMLMediaElement接口，以控制加密内容的播放。

- **Audio Focus API**

- API用于改善网站与本地应用程序的音频混合，以便它们播放或以独占方式播放。

- **Encoders/Decoders API** 向Web应用程序公开媒体编码/解码功能的API。

# 对“ Web媒体娱乐视角” 发言稿的解读

## Studies on "A perspective on Media & Entertainment for the Web "

### Chapter: 5.3 Move to IP

#### □ Distribution over IP

- 很多企业都有服务于Web/APP超高清视频的CDN网络。为了提升视频播放时延，企业会研究如何把CDN节点下沉到更接近用户。比如下沉到边缘计算节点。
- Companies have CDN networks for Web/APP-based Ultra-High Definition Video services. To decrease latency of web video playback, companies focus on how to downward CDN nodes closer to users. For example, to downward them to MEC Mobile Edge Computing node.
- CDN演进技术：P2P CDN。边缘CDN之间可以互相访问；传统的CDN网络，边缘CDN只能回源站，对核心网络的流量有冲击。
- CDN's evolution: P2P CDN. Edge CDN can access each other; Edge CDN in traditional CDN network can only return to the source sites, which impacts on core network traffic.

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#### □ Production over IP

□ 趋势：低时延技术。 **Trend: Low-latency technology.**

摄像机摄像之后，使用专有的小型设备进行数据无损压缩或者质量无损压缩，然后通过5G无线传输到后台制作中心，恢复信源之后再制作。

After film shooting, data or quality lossless compression is carried out by using dedicated portable equipment, then transmitted to the **production center** by **5G** wireless transmission. Production is after decoding the source.

对5G带宽和算法有要求。5G能够提供高带宽，上行峰值带宽可以达到1G bps；为了防止用户带宽挤压，5G提供了切片技术保证带宽。此技术可用于5G Web环境。

Requirements for 5G's bandwidth and algorithm. 5G can provide high bandwidth, the upstream peak bandwidth can reach **1G bps**; To prevent squeezing user bandwidth, 5G provides **network slicing** to ensure Web/APP bandwidth.

# 对“ Web媒体娱乐视角” 发言稿的解读

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### Chapter: 5.3 Move to IP

#### ❑ Cloud-based processing

Standardization efforts to develop media foundations for the Web

❑ 云化是趋势。基于Web典型云化系统，包含音视频信号预检、CDN源站、播控、转码、流媒体服务等功能。

❑ Cloud is the trend. A typical web-based cloud system including signal pre-detection, CDN source sites, broadcast control, transcoding, streaming media services and other functions.

❑ CDN下沉到MEC，这也是云化处理：使用通用硬件，通用平台，定制化APP软件。

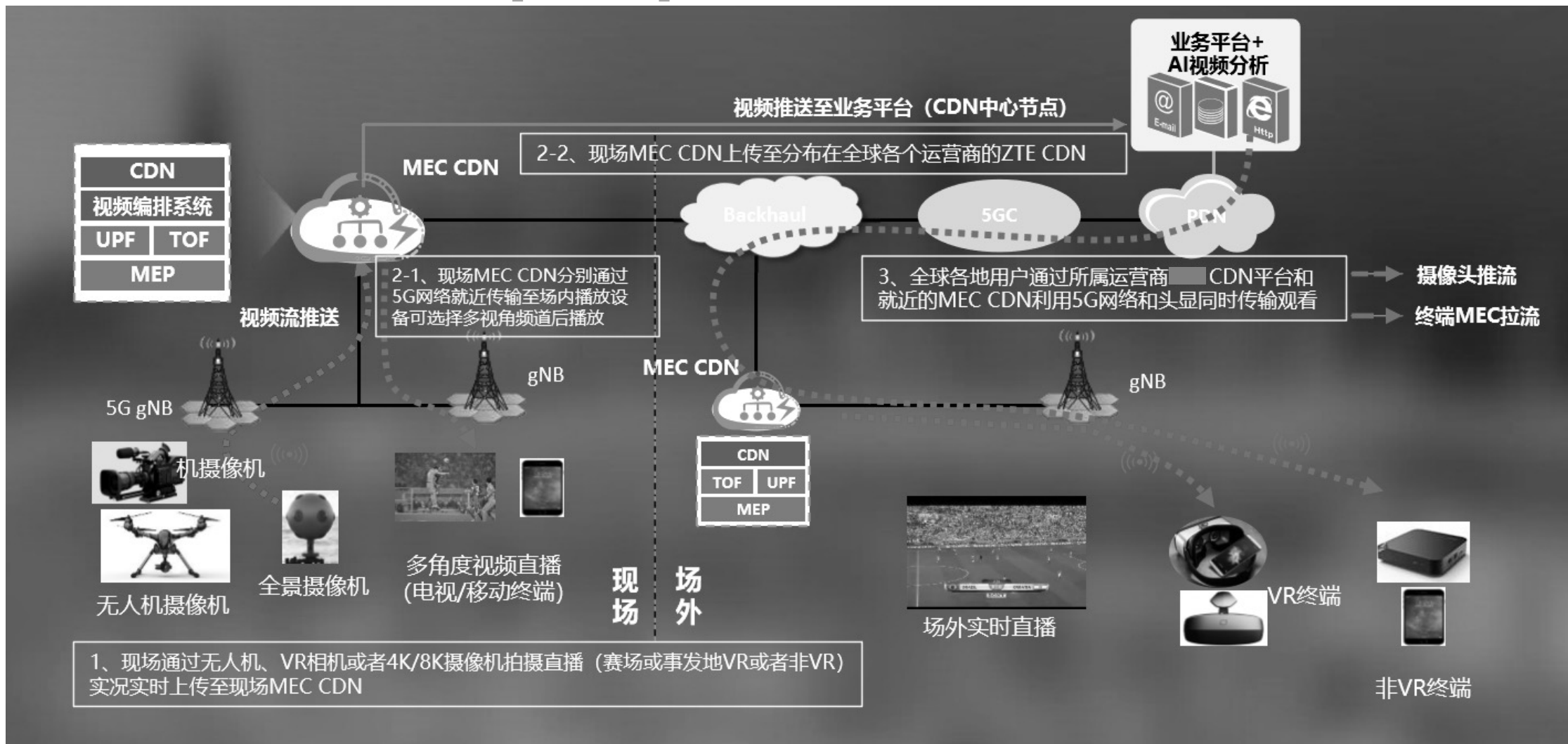
To **downward CDN to MEC** is also cloud-based processing: Utilizing generic hardware, platform.

❑ 基于Web视频编解码器也可能下沉到边缘计算节点。

Web-based video codec may also downward to Mobile Edge Computing(MEC).

# 对“Web媒体娱乐视角”发言稿的解读

## Studies on "A perspective on ME for Web" :



SDI' s move to IP: Web-based UHD service over 5G and MEC



# 对“ Web媒体娱乐视角” 发言稿的解读

## Studies on "A perspective on Media & Entertainment for the Web "

希望各个成员能够为编辑草案(Editor's Draft)提供更多建议:

Your suggestions for the followings are appreciated:

- 描述现金流能否体现行业趋势？是否应该描述行业生态链的不同角色(影视内容生产商，广播运营商，CDN服务者，解决方案提供商，设备制造商)，以及区域性商业成功因素(包括公共服务，技术监管等)？
- Is describing main money flows a good way to present the industry? Should the document rather (or also) present the different actors (content producers, broadcasters, CDNs, solution providers, device manufacturers, etc.) and e.g. present historical facts that explain regional aspects (public services, technology regulations, etc.)?

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Your suggestions for the followings are appreciated:

- 是否有缺失的媒体娱乐Web技术？哪些技术已经陈旧淘汰？
- Any missing trend? Any trend that should be dropped? Are trend descriptions clear enough?
- 融媒体的场景定义是否太宽广或者太狭窄？
- Is the depicted convergence too broad? Too specific? Far-fetched?
- 各个成员公司提供能够提供更多商业使用场景
- Include a more concrete use case scenario to make the convergence more tangible