

Ilyas Laikov



РЕШЕНИЯ АТЕМЕ ДЛЯ 5G BROADCASTING



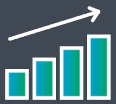
ATEME
Captive your audience

01 О КОМПАНИИ

THE VIDEO DELIVERY LEADER



Public since 2014



81.1 M€ in 2021



1.96M€ (Jan 2022)



+490 people in 20 countries

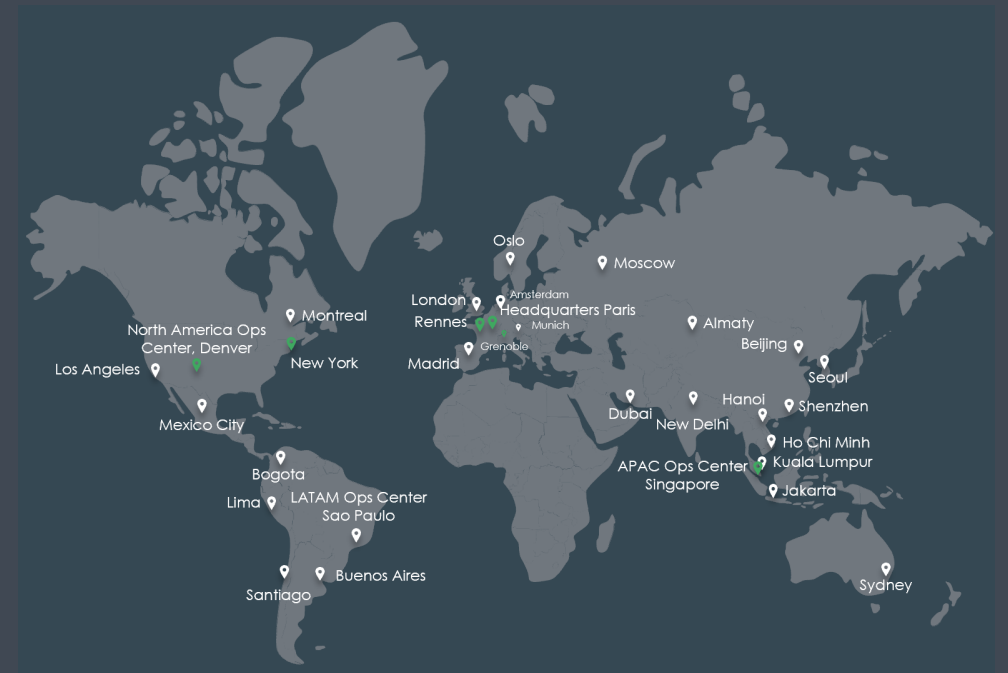


1000+ clients in 100 countries



62 patents
Winner of multiple awards

Ateme enables **content providers** and **service providers** to captivate their audiences with a superior **Quality of Experience**, so they can **boost viewership** engagement, acquire **new customers**, and unleash **new monetization** potential.



UNIQUE INVOLVEMENT IN STANDARDIZATION

Ateme working on
NextGen audio/video standards

VVC: Successor of HEVC enabling bandwidth to be divided by 2,
enabling 4K/8K transmission



Ateme working on
innovations for enhancing delivery

ATSC 3.0: The new US broadcast standard combining
over-the-air & OTT, expanding in Brazil & India



AV1: Internet leaders partnering in 2017.
a royalty-free alternative to HEVC, looking for AV2



Open Caching: Interconnection of caches,
so content is closer to end-viewers, CDN monetization enabled



Ateme active member of:



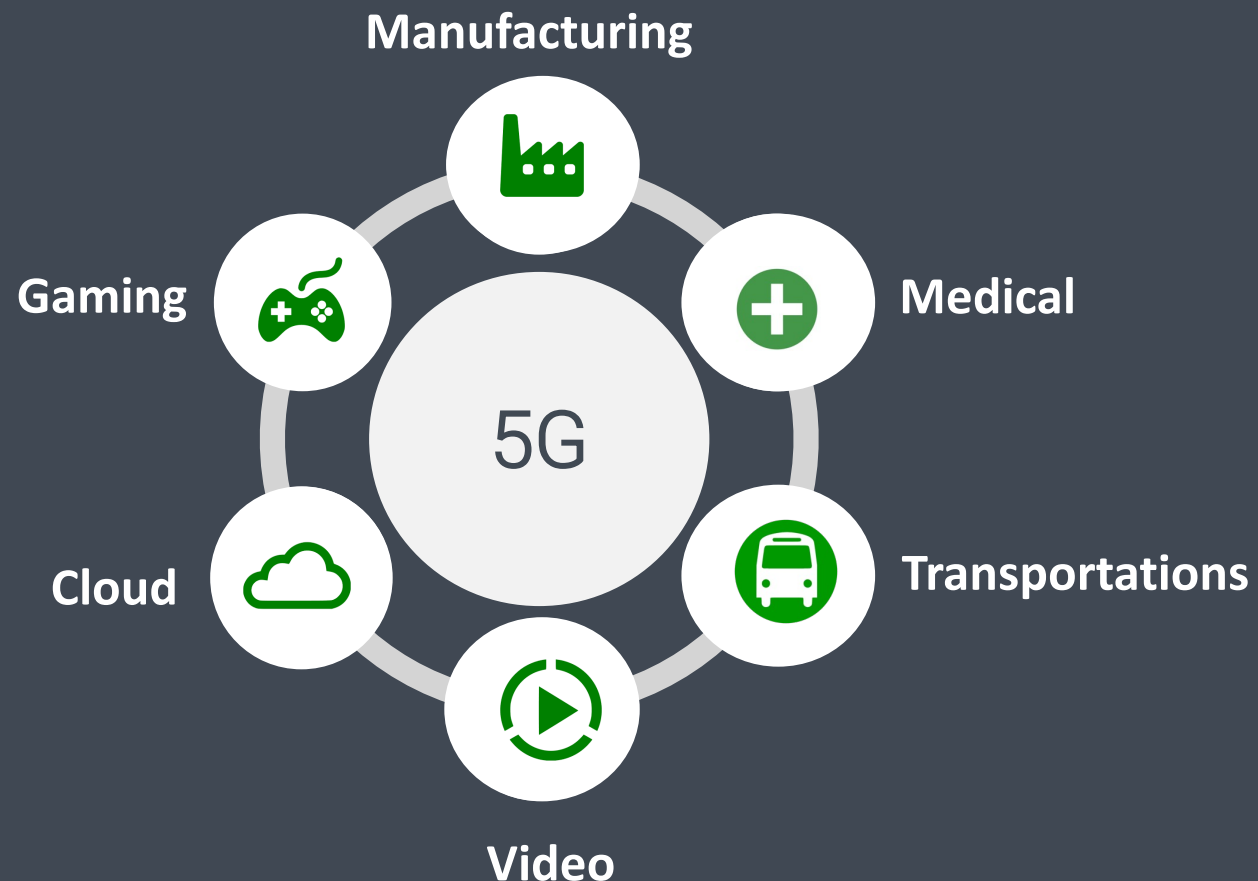
Решения Атеме для 5G

ВЛИЯНИЕ 5G НА ВЕРТИКАЛЬНЫЕ РЫНКИ

5G откроет путь для:

- > Новый опыт для gaming (AR/VR)
- > Удаленное здравоохранение
- > Гибкость для производства
- > Самодвижущийся транспорт
- > Распределенные облачные возможности
- > ...

... Улучшенный видео опыт!



5G : ЧТО ВАЖНО ДЛЯ ВИДЕО СТРИМИНГА



Высокая пропускная способность

- > Высокое разрешение видео (4K, 8K и пр) и аудио (Dolby Atmos)
- > Новые пользовательские приложения (например VR)
- > Профессиональные кейсы (contribution)



Edge Computing (MEC)

- Оркестрирование в MEC
- Улучшается QoE с Unicast CDN edge caching
- Новые сценарии – персонализированное TV



Broadcast

- Принято 3GPP 5G Media Streaming group (Release 17)
- Большое количество совместимых устройств (mobile & TVs)
- Появление новых сценариев

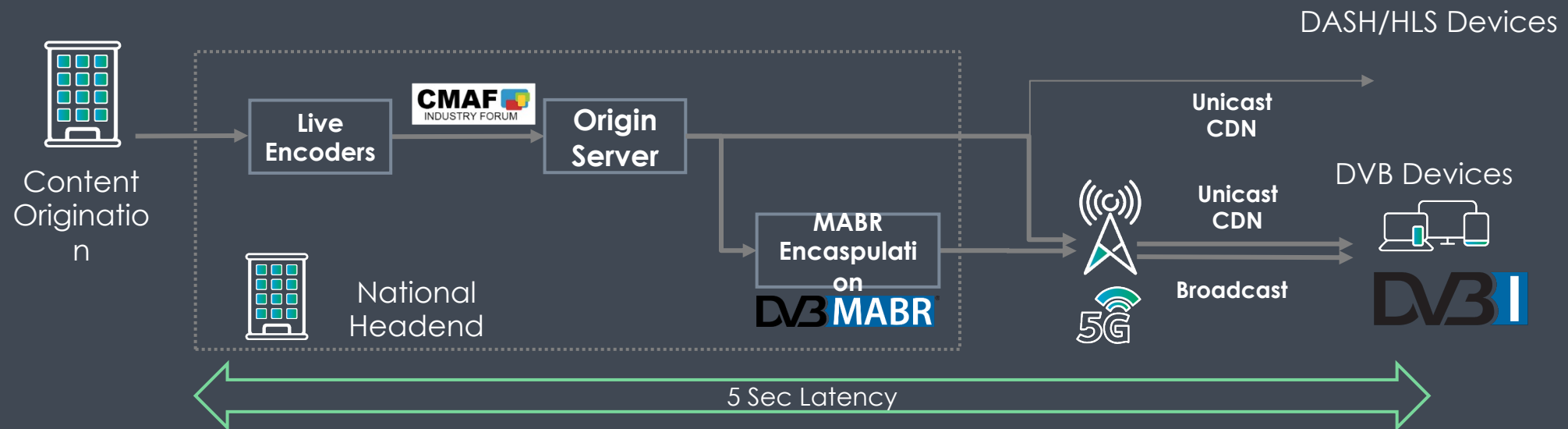
5G BROADCAST AND STREAMING

Стандарты

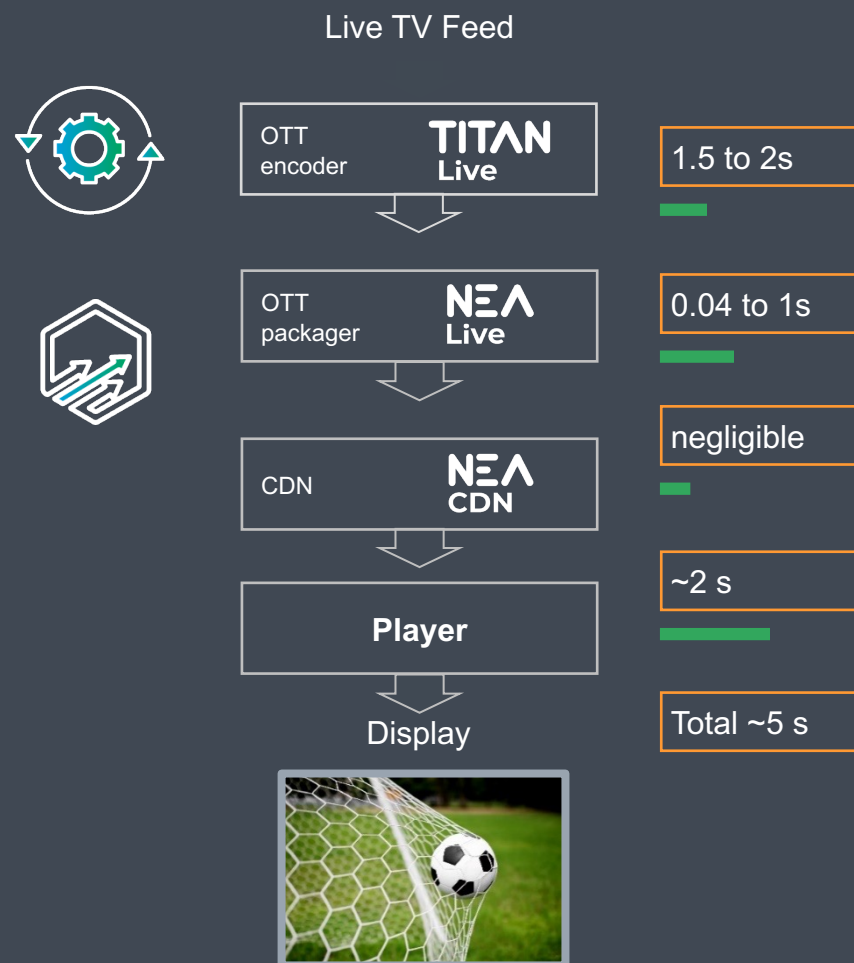
- > LTE Based 5G broadcast (3gpp)
- > 5G Media Streaming (unicast) (3gpp)
- > 5G MAG reference tools
- > Сервисный уровень опирается на IP стриминг
DVB-I Стандарт (DASH CMAF, LL, MABR, codecs)



**5G
MAG**



НИЗКИЕ ЗАДЕРЖКИ



Функционал

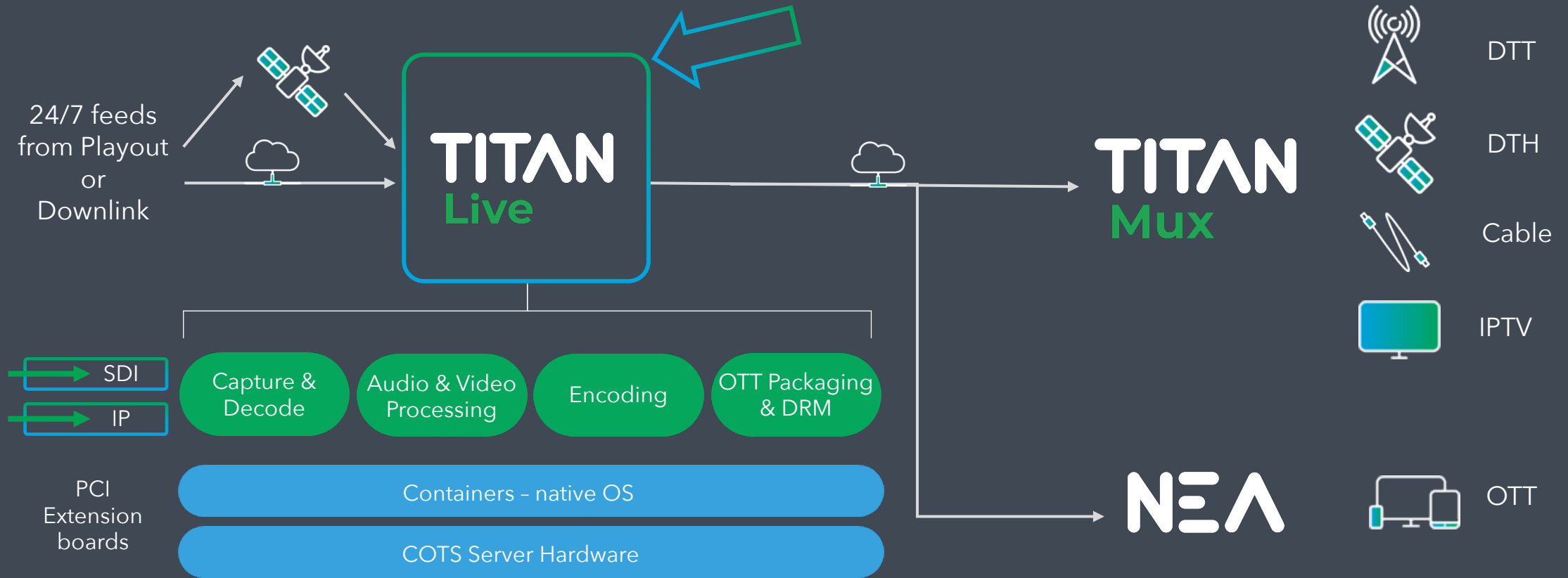
- Low Latency кодирование
- LL-DASH & LL-HLS пакетирование и CDN
- Валидация со множеством плееров

Как мы можем помочь

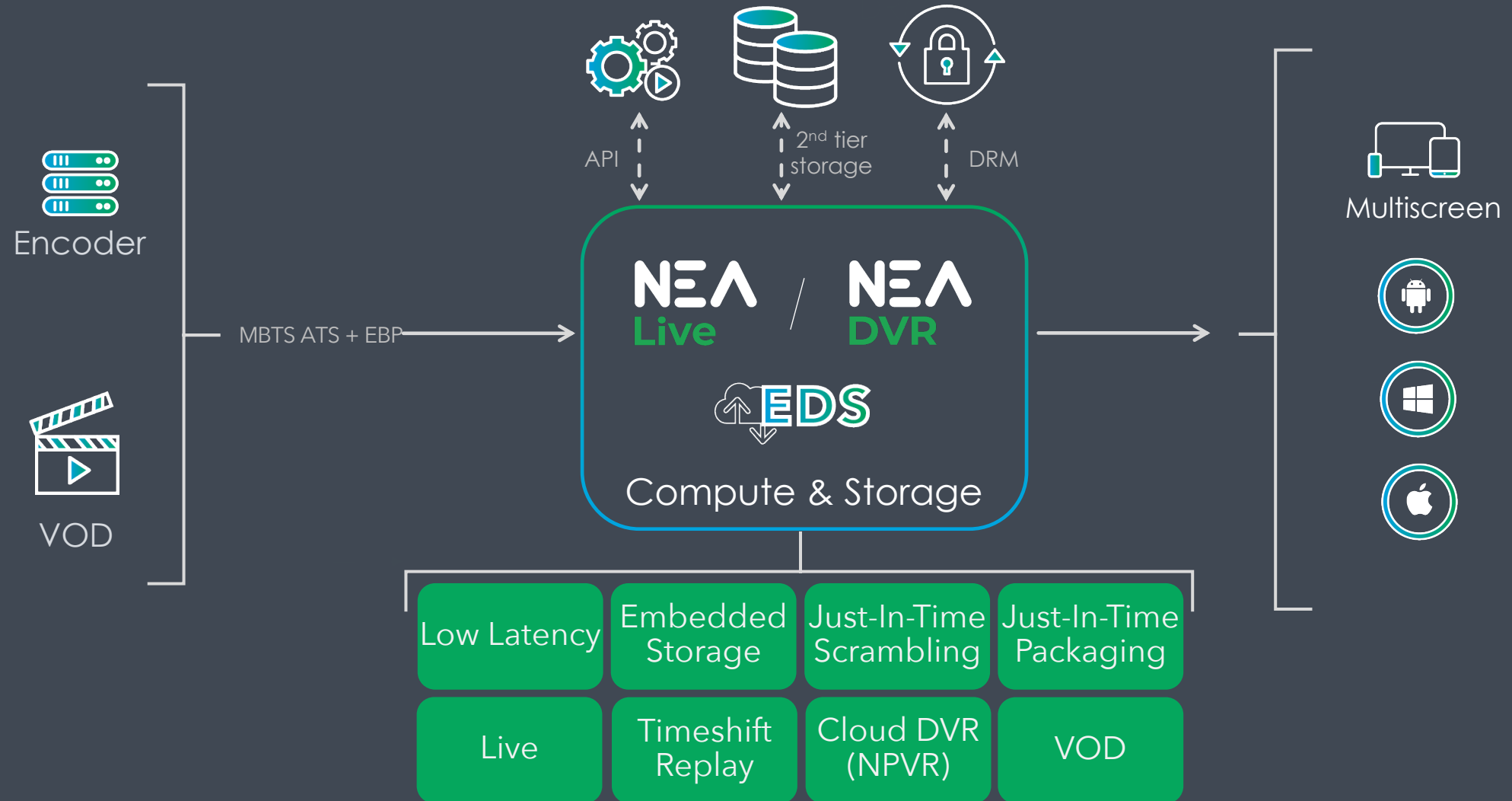
- Задержка сравнимая с бродкастом
- Нет буферизации на плеере
- Превосходное QoE на любом экране

TITAN LIVE IN THE CONVERGED HEADEND

PILOT Manager



NEA-DVR[®]

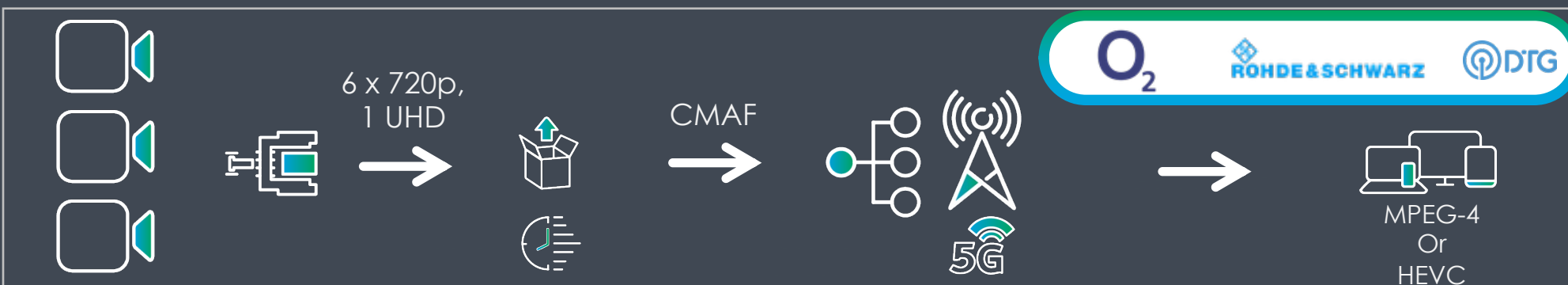


ПИЛОТНЫЕ ПРОЕКТЫ

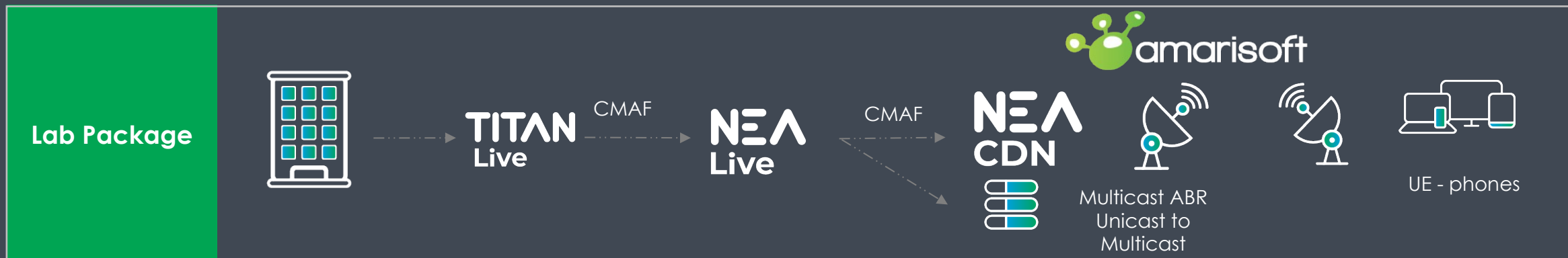
Green Delivery



In Stadium Broadcast



ЛАБОРАТОРНЫЙ КОМПЛЕКТ



- Station gNodeB 5G
- 500UEs
- 200mbps Downlink, 75mbps Uplink
- Up to 10 UHD
- Up to 200 720p

- UE
- OnePlus 9 (multicast / Unicast)
 - iPhone 12 (Unicast)

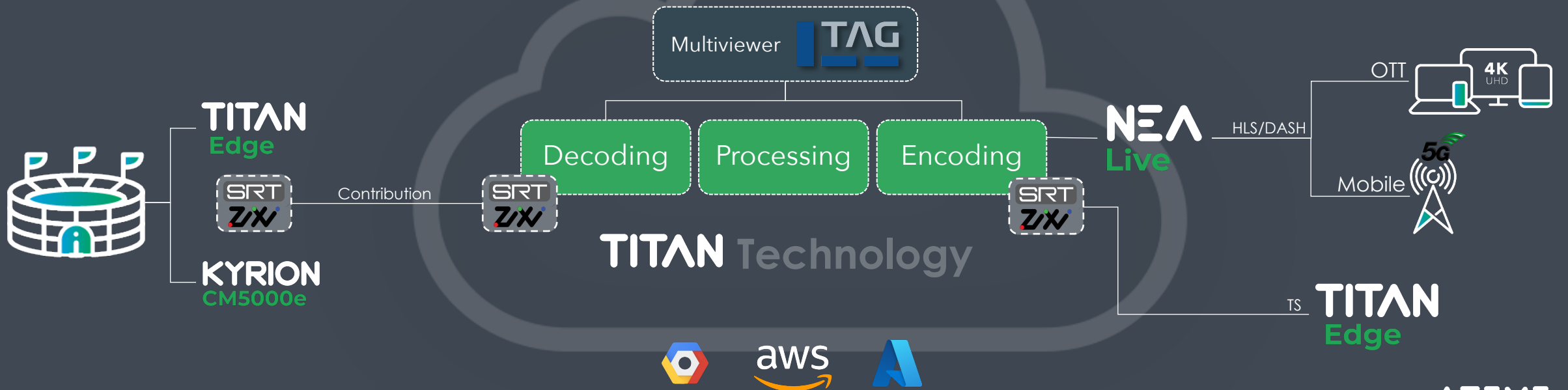


Еще немного про IBC

ATEME+ LIVE

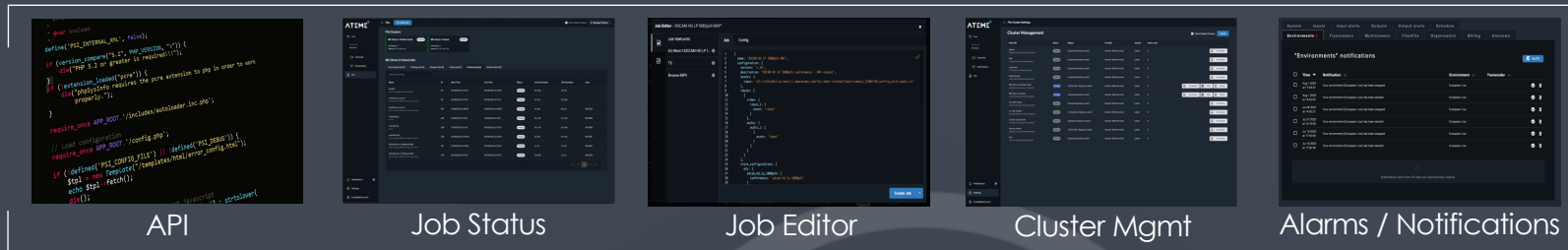
Console

Scheduling Multiviewer Encoding Config Alarms / Notifications API



ATEME+ FILE

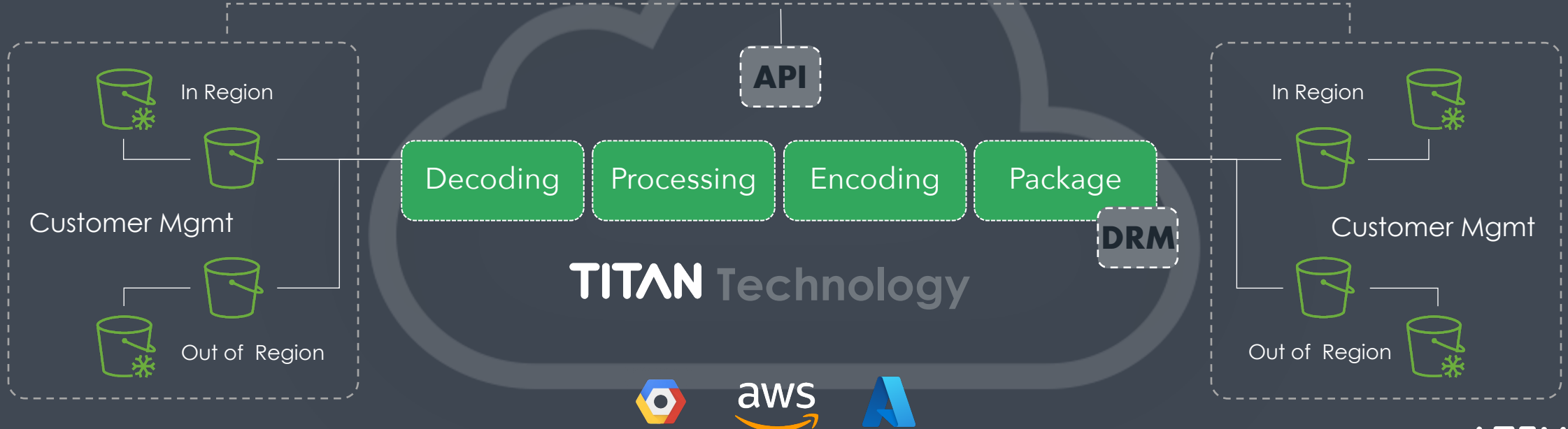
Console



The console interface is divided into five main sections:

- API:** Displays code snippets for API interactions.
- Job Status:** Shows a list of jobs with their current status.
- Job Editor:** Provides a visual editor for configuring job parameters.
- Cluster Mgmt:** Offers tools for managing the underlying infrastructure clusters.
- Alarms / Notifications:** Displays alerts and notification settings for system events.

Workflow




РЕГИОНАЛИЗАЦИЯ И ВСТАВКА РЕКЛАМЫ

OTT
HLS & DASH

Broadcast
TS

OTT Live, VOD and DVR Monetization
a.k.a Addressable TV



OTT Live Regionalization 
a.k.a Linear Parity




Channel Origination VOD to Live



ATSC 3.0 & HbbTV Monetization
a.k.a DVB-T/S Connected TV



Linear / Broadcast Monetization
a.k.a TS Splicing

	Broadcasters	Broadcasters Network Operator	Cable / Telco IPTV + OTT	Pure OTT	DTH Operator
OTT Live, VOD and DVR Monetization a.k.a Addressable TV	✓	✓	✓	✓	
OTT Live Regionalization  a.k.a Linear Parity			✓		
Channel Origination VOD to Live	✓	✓	✓	✓	
ATSC 3.0 & HbbTV Monetization a.k.a DVB-T/S Connected TV	✓				✓
Linear / Broadcast Monetization a.k.a TS Splicing	✓	✓	✓		✓

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ATEME
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THANK YOU.