

Platform architecture

- Operator network capacity and efficiency, virtualization, scalability, redundancy, SDN-NBI architecture, HA design, SW accessibility
- Video platform architectures: Ericsson, Nokia/Alcatel-Lucent, Affirmed Networks, Cisco Systems, Huawei, KIT Digital (my own design)
- Video backend system providers; Pikel, Kaltura, SeaChange, Espial
- SaaS, PaaS and IaaS designs with DTO, AVOD, VOD, XVOD, TVOD, FVOD, SVOD business models

Platform components

- CMS, workflow management, CRM, billing, OSS/BSS, NPVR, Recommendations/Discovery Engines, DRM / CA servers, Streaming Servers, Origin / Edge servers, CDN, Catalogue management systems (linear / VOD / Catchup / Promotional), NGINX, DVB components, QoS/QoE monitoring systems and agents, analytics, big data, Online video portals, signaling adaptors
- IRD, Encoders/transcoders, packagers, JITP, encryptors / scramblers, multiplexers multicast, unicast, ad insertion, watch folder
- Subscriber, rights, device and product management systems
- Content processing vendors: Harmonic, Elemental (AWS), Envivio, Ericsson, Cisco, RGB Networks
- Metadata enhancement, recommendations/discovery engines vendors; Think Analytics, Rovi, Digital Smiths, IMDB, Rotten tomatoes, Rovi, MovieLabs, RedBee (Ericsson)
- CA/DRM vendors: Cisco, Microsoft, Apple, Adobe, Kudelski (Nagra), Google (Widevine), Verimatrix, Conax, Irdeto, Viaccess-Orca (Viaccess)
- CMS vendors: Ericsson, Cisco, Kaltura, SeaChange, Arris, Huawei, Espial
- CDN providers: Public: Akamai, Limelight, Level 3, Jet-Stream, Highwinds, Internap. Telco CDN: Cisco, Huawei, Ericsson. Cloud CDN: AWS CloudFront, GCP Cloud CDN
- Frontend and multiscreen vendors: 24/i, Accedo, 3 Screen Solutions, Pikel, Zenterio, NDS (Cisco)

Platform technologies

- Telco/private/public/cloud/federated CDNs
- Mobile data network architecture: 3G/4G/LTE, SGSN, GGSN, SGW, PGW, FW, DPI, Video and HTTP cache, PCRF, Wi-Fi offloading, femto-micro-pico-cells, MPLS, SON (Self-organizing network), NFV
- MPEG/2, ABR, H.264, HEVC, AV1, DASH, HLS, MSS, RTP, RTSP, etc.
- Video platform business and application framework functional mapping and definition against eTOM and TAM frameworks

Protection and security

- CA, DRM, HDCP, Water/StreamMarking, TEE, OS hardening, Platform/Network/Application/Device security, Access and Authorization, data protection and privacy, cloud security

Big data and analytics

- Hadoop, HBase, Kafka, Flume, Spark Streaming, public cloud-based big data and analytics platforms (AWS, GCP). Adobe, Telemetria, Conviva, Interra, Ineoquest, Tektronix, Netcool, Genius Digital, Witbe, Splunk, Nagios monitoring and analytics tools
- Linear and VOD metadata: Media RSS, ATOM, ADI and some proprietary metadata standards. Metadata processing servers detailed design and implementation

Frontend technologies and connected devices

- NGINX, Redis, AngularJS, Objective-C, Swift 2, Java for mobile, NodeJS, tvOS, SEO
- Mobile phones, tablets, STBs, Dongle/casting devices, Smart TVs, browsers, desktop apps, game consoles, casting devices, monitoring agents, IoT