

Networked Production



1 – What does Networked Production mean?

Networked production is about digital IT file-based production (networking, computerisation, database management, etc.). Furthermore, content is now directly captured and ingested as a file, leading to tapeless production. IT file-based production will have non-technological and technological impacts on the evolution of current operational practices.

2 – What are the main business advantages of networked production?

Networked production is considered as the solution to optimise the generation of content for cross-platform and cross-media delivery. It helps maximising the use of production processes (“produce once and use many”) while supporting adaptation and customisation. Network production is also a platform for interoperability, which is favourable to a more competitive multi-vendor market preventing lock-ins to proprietary solutions.

3 – What are the main technical advantages of networked production?

Network production is by nature more modular, agile and scalable. Functions represented by discrete, dedicated “pieces” of traditional production hardware are becoming one of several functions of a multipurpose software or hardware platform. If entitled to do so, several users can simultaneously access different parts of the content in production and can independently search, browse and retrieve data in a collaborative environment. This allows maximum adaptability to specific workflows and provides a sound basis for evolution and maintenance (upgrade and renewability) of the production platform. However, the price is some added complexity.

4 – What is the situation of IT file-based production on the market?

Many products such as capture, ingest and asset management systems are already available and all new developments will be made in this context. One important characteristic of these IT-based products is a shortened life-cycle, which may be an impact on the investment plans.

5 – What should I do to migrate to an IT file based production environment?

Analyse your existing workflows and optimize it for a networked production environment e.g. migrating from tape-based workflows to file based workflows. It is important to identify reusable components: what similar ‘roles’ would reuse similar ‘resources’ across different production units? The co-existence of traditional and IT based technologies (e.g. SDI and networks) will provoke “gateway issues” that will need to be studied and resolved.



6 – Who should define the requirements and select solutions?

The most important non-technological impacts embrace the radical changes in business processes and workflows. Relationship to manufacturers will be different. Financing IT based production requires new budget structures. Not the least, human issues (new jobs, training, etc) shall not be underestimated.

Networked production touches all the domains of competence of production. All concerned teams/staffs should be involved as early as possible in the definition of the requirements. The decision shall not be centred around the needs of a particular production pole.

7 – Are there specific technical issues?

Attention is needed around interoperability between all components of the planned networked production environment such as the file formats (e.g. a common profile for MXF), compression systems (for SDTV and HDTV with clear usage and quality objectives) or metadata (in-house data model and common attributes for exchange). The use of standards and guidelines is strongly recommended.

System integration (e.g. command and control structures) must be well planned in order to avoid costly workarounds like software patches (proprietary interfaces) for the interconnection of individual systems.

Make sure that all business objects, e.g. programmes, items and clips, can be uniquely identified within your networked system environment;

Proper network management is key (fault, configuration, accounting, performance and security).

8 – Is this the end of production silos?

Networked production is one step into maximising the use of production resources but there will still be production silos like for 'news'. However, new production units should be developed in the prospect of future tighter integration taking already benefit of the above mentioned business and technical advantages.

9 – What is Service Oriented Architecture (SOA)?

SOA, or similar alternative architectures, are another step into the implementation of IT file-based production. Proprietary implementations of SOA are already available on the market but more standardisation work is underway for more interoperability.

10 – What are the EBU activities on networked production?

The EBU has established a project under the umbrella of the Production Management Committee. The scope covers all aspects of networked production including new architectures, file formats, encoding formats, and metadata. More than ten broadcasters participates in this strategic work.

More information and resources are available from: <http://tech.ebu.ch/groups/pnp>