MEDIA & ENTERTAINMENT
INDUSTRY OVERVIEW

Lenovo

Film

Fully animated feature or short
Fully animated films are motion pictures where a significant number of the major characters must be animated, and animation must figure in no less than 75 percent of the picture's running time. Animation can be either traditional (hand drawn or stop-motion) or computer generated. Typically, these productions are geared toward younger audiences.
Project examples: Frozen, The Peanuts Movie, The Good Dinosaur

VFX centric
VFX centric films are live-action in nature and contain a large number of visual effects that support and contribute to tell the story. Typically the films fall in to the action-adventure or science fiction categories, where the visual effects can range from monsters and spaceships to explosions and other worldly looks.
Project examples: Jurassic World, Star Wars: The Force Awakens

Passive
Passive effects films are typically live-action, where the visual effects are not intended to be the focal point of the movie, rather the effect goes unnoticed by the audience. Passive effects are typically color correction, set extensions, fire, smoke, or the addition or removal of inanimate objects.
Project examples: Spectre, The Walk, Furious 7, Mad Max: Fury Road

Television

Episodic
Episodic television series are seasonal in nature, and are typically ½ hour to 1 hour in length. These series can be found on standard network programming, cable and satellite, premium programming or on demand. Episodic television production is very similar to that of film production through utilization of digital technologies to shoot, edit, add effects and finish.
Project examples: Game of Thrones, Breaking Bad, Walking Dead

Short-form POST
Short-form POST refers to any work that is under 15 minutes in length and intended for broadcast. Typically these projects are commercials, music videos, corporate projects or training materials. Short-form POST can vary in complexity from basic editing and graphics, to incorporating some if not all of the same visual effects techniques and tools used in feature film.
Project examples: Commercials, Music Videos, Corporate Videos

Broadcast graphics
Broadcast graphics are in some instances referred to as motion graphics. All broadcasters across the globe incorporate broadcast graphics throughout their programming, spanning from global networks to local affiliates. The graphics are intended to grab the attention of the audience for promotion, network identifiers and provide the audience with key information that is relevant to the programming.
Project examples: Station IDs, Breaking News, Sporting Event Information

Game Development

Console
The term console games is used to distinguish a video game developed for a gaming console versus an arcade machines or home computers. Console games contain dedicated processing and graphics hardware, a device to control game play, and connect to the gamers' television. The primary consoles in use today are the Sony® PlayStation™ 4 (PS4™), Microsoft Xbox One and Nintendo® Wii U™.

Mobile
Mobile games are games designed for mobile devices running iOS, Android™ or Windows Mobile operating systems, such as smartphones and tablet PCs. Mobile games range from basic card games to sophisticated 3D and augmented reality types of games.

PC
PC games, also known as computer games, are video games played on a personal computer rather than a dedicated video game console, mobile device or arcade machine. What differentiates PC games from other types of games is PC hardware typically has increased input, processing and output capabilities making for a more robust gaming experience.

Client Expectations — **Production Resources**

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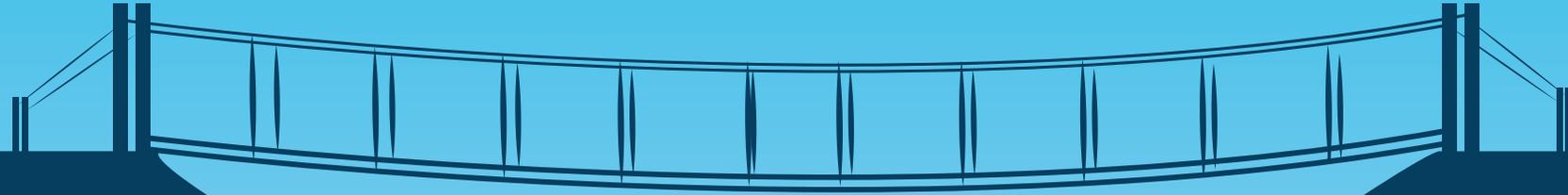
Technology

» Latest hardware architectures, CPU and GPU offerings «

» Tested and qualified hardware for dependable results «

» Integrated color calibration and 4K display for mobile workstation «

» Workstations designed to run cooler and more efficient; leading the industry in reliability «

Production efficiency

» New production techniques made possible through technology advancements «

» Multitouch and pen-based input capabilities for more creative options «

» Powerful mobile workstation offerings for on-set and location-based production «

» Workstations that are not a barrier between the artist and their art «

Audience expectations → Consumers of film, television and game content are becoming more savvy and expect their next entertainment experience to be better than the previous. This in turn forces studios to continually raise the entertainment bar to keep consumers coming back to movie theaters, watching television programming and purchasing new game titles.

Studio expectations → Studios continually have to meet and exceed the audience expectations with each new release. In order to fill the insatiable appetite of consumers, studios have to release more elaborate and visually compelling works. This, in turn, has a cascading effect on the production facilities tasked with the development of this content.

Production facilities → With consumers demanding ever better entertainment experiences, production facilities are required to deliver a larger number visual effects shots with increased complexity. In addition, the timelines for delivery are shrinking along with budgets remaining flat or declining. This has created a gap between the studios expectations and the production resources.

LENOVO™ HELPS BRIDGE
PRODUCTION CHALLENGES

Lenovo™

P70

P500   P700   P900   P40 Yoga

Hardware that provides artists and facilities:

Performance:
- Designed for performance, expandability and upgradability
- Latest CPU and GPU offerings

Reliability:
- Workstations engineered to run cooler and more efficient
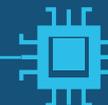- Self-diagnostics to identify issues before they impact production

Breadth and depth:
- Regardless of the production Lenovo™ has a solution that will exceed the requirement
- Wide range of ThinkStation® desktop and ThinkPad® mobile workstations
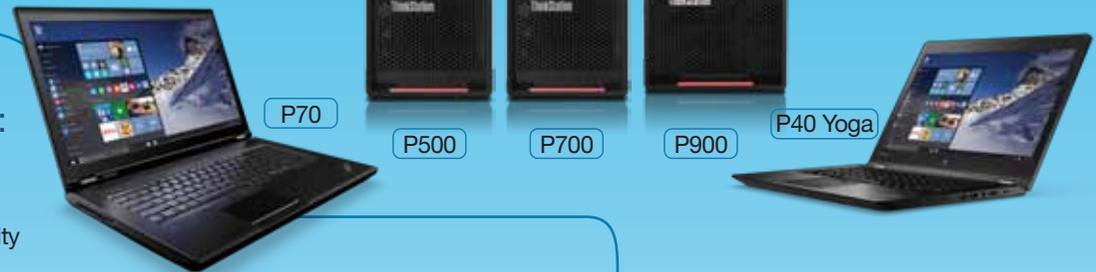
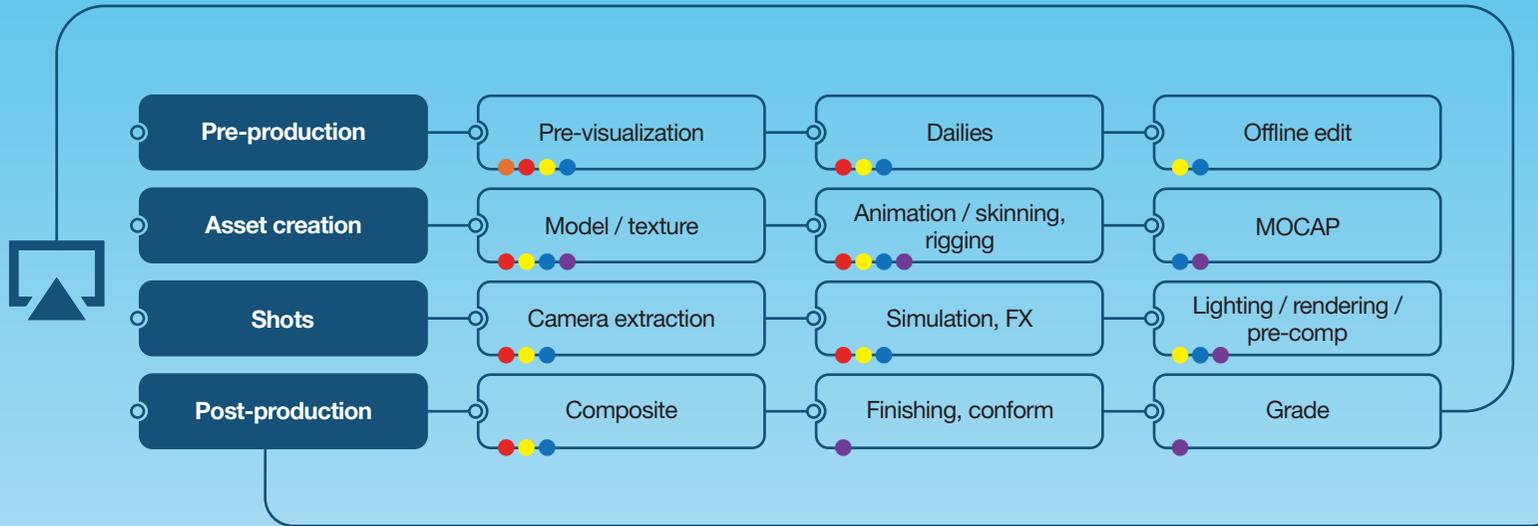### Lenovo™ supports the media & entertainment industry

- Artist advocacy, through support of artist driven events for continued education and peer networking
- Established relationships with software developers within the media & entertainment industry to help remove barriers between artists and the art they are creating through certifications, technology roadmaps, hardware benchmarking and testing

LENOVO™ WORKSTATIONS
IN THE PRODUCTION PIPELINE

Film & Television

Pre-production	Pre-visualization	Dailies	Offline edit
Asset creation	Model / texture	Animation / skinning, rigging	MOCAP
Shots	Camera extraction	Simulation, FX	Lighting / rendering / pre-comp
Post-production	Composite	Finishing, conform	Grade

P40 Yoga

P70

P500

P700

P900

Game Development

Design	Game framework		
Characters & game assets	Model / texture	Animation	MOCAP
Levels & environments	Grey-boxing	Collision mesh	Navigation mesh
Program / build	New development	Middleware integration	Build