The Engine™ module is one of the main modules needed for processing digitalized tissue sections with quantitative Image Analysis (IA) tools. The Engine™ is also the execution platform for IA Application Protocol Packages (APPs). It was developed specifically with speed, scalability, and cost efficiency in mind, so diagnostic and research laboratories can match specific throughput requirements and grow in a logical and highly cost efficient way.

Increasing the number of Engine™ installations expands the processing capability and speed of Visiopharm’s image analysis platform and allows users to queue analysis of virtual slide images and distribute slides for batch processing and simultaneous IA. Engine™ is validated for in vitro diagnostic use (CE IVD) in Europe in combination with the Visiopharm CE IVD APPs: Ki-67, ER, PR, HER2, Invasive Tumor Detection (PDS), and Hot Spot [ref. 1]. All other applications are for Research Use Only.

Example 1. Expand processing capacity with additional computers to shorten time to result significantly.
Endless Speed

Engine™ demonstrates processing speeds well above the current speed limits of quantitative digital pathology, greatly improving productivity in diagnostic and research laboratories. Reproducible and accurate quantitative data is now delivered at a much higher speed by adding computers.

Visiopharm continuously strives towards optimal performance and offers a highly efficient analysis of whole slide images. Especially for very heterogeneous tumors, users will experience huge performance leaps as newer versions of this software runs multiple times faster than the previous version.

The faster processing time with Engine™ does not compromise the high accuracy or precision experienced.

Queuing

Engine™ allows the user to queue virtual slide images and process them in the background allowing the operator to work on other tasks in parallel. The images will be processed according to the power of the computers in the cluster either in consecutive order or in parallel.

Example 2. Slides are processed in parallel by adding extra computers to the cluster with the option to queue slides.

Advantages of Engine™:

- Optimized processing of single slides utilizing only one PC ensures faster execution times
- Faster processing time with Engine™ does not compromise the high accuracy or precision
- Continue using the software for other tasks while running jobs in the background
- Ability to execute a sequence of Ready-to-Use APPs for advanced Image Analysis

Advantages of multiple Engine™ modules:

- Scalable deployment for batch processing of multiple slides in parallel further increases processing, analytical power and speed
- Maximizes efficiency through sharing of computing resources
- No need for expensive super computers to achieve increased productivity on a massive scale
- Running jobs in the background will allow users to continue their other work with the software without locking all system resources
- Ability to queue jobs

References