

DeltaVision®

Point-Visiting with Integrated Cell Tracking: Enabling Technologies for Advanced Live Cell Imaging

Extending Point-Visiting with Integrated Cell Tracking, a DeltaVision exclusive!

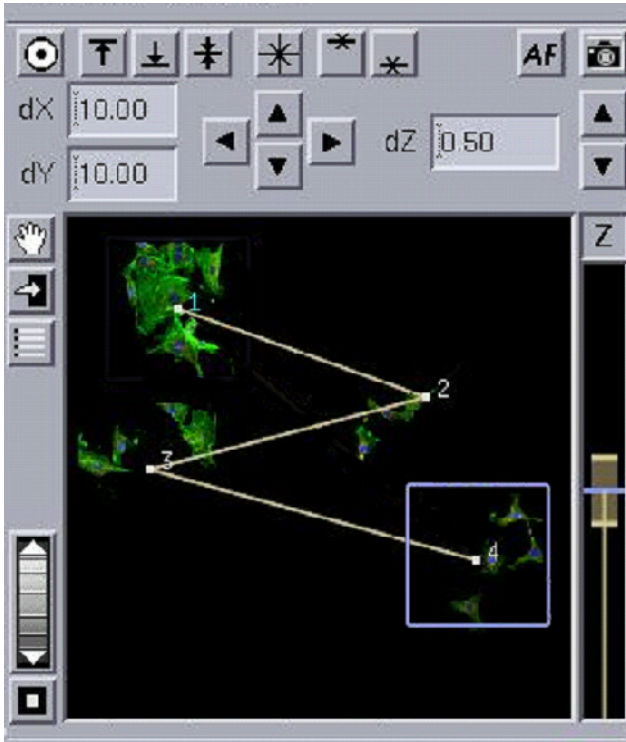
Integrated Cell Tracking, coupled with Point-Visiting, and DeltaVision's unparalleled 3D stage, enables truly automated, precise, multi-site imaging for live cell, time-lapse microscopy. Integrated Cell Tracking automatically tracks cells as they move and ensures that they stay at the center of the frame between time points. In addition, the speed of data collection in the DeltaVision system has been significantly accelerated to enable the use of Point-Visiting with integrated Cell Tracking in applications that require rapid acquisition times.

For live cell imaging, Applied Precision's exclusive Nanomover® technology enables an important addition to live cell imaging: Point Visiting. The DeltaVision system's highly accurate and repeatable 3D motorized stage allows a user to repeatedly visit a series of points on a coverslip. The point-to-point accuracy, precision, and total travel of the DeltaVision stage are unmatched in the industry. Easy-to-use softWoRx® software allows programming of virtually an unlimited number of points on a single slide. Each of these points can be visited in succession and the fast accurate Nanomover motors ensure that minimal time is lost moving between different imaging sites while maintaining industry-leading accuracy and precision – advanced Point Visiting.

Point-Visiting is a critical tool for advanced Live Cell imaging. Instead of recording one cell or field in a single experiment, multiple sites can be imaged in a single experiment. In practice, the number of sites is limited only by the minimum acceptable time interval between each time point at a single site. This makes time-lapse imaging much more efficient, and allows enough data to be collected easily to generate statistically significant results. In addition, variability between cells within an experiment can be assayed, eliminating uncertainty as to the behavior of cells in a single experiment.

When comparing the advanced DeltaVision stage to other competitive stages, it is critical to remember that the DeltaVision stage has always been a three-dimensional (3D) stage and only the DeltaVision stage has the accuracy and precision necessary for the highest levels of parallel (Point-Visiting) live cell experiments.

The softWoRx Resolve3D Stage View displays the points in a point-visiting experiment.



Thumbnail images are displayed for each point. Tan lines show the stage trails (the paths of the stage movement between points).

Quantitative live cell imaging truly benefits from Point Visiting to ensure quantifiable data and measure cell-to-cell variability. The DeltaVision 3D stage is unmatched in accuracy and precision. When combined with the integrated Cell Tracking feature, available only on DeltaVision, the user can be assured of the highest quality imaging results from their advanced live cell experiments.