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MOTU DEMOS AUDIO SEQUENCING MILESTONES IN DIGITAL PERFORMER 2.7

MACWORLD 2000, San Francisco - January 4, 2000. Mark of the Unicorn, Inc. (MOTU) demonstrated several audio sequencing milestones in Digital Performer 2.7, MOTU's flagship audio sequencer for Macintosh. Highlights included adjustable PPQ (parts per quarter note) resolution, a proprietary hardware-based MIDI timing technology called MIDI Time Stamping™, beat-based effects automation, a new Drum Editor window with a unique 'Rhythm Brush' tool, and several new audio plug-ins.

Adjustable PPQ

"We've taken MIDI sequencing precision to a new level," said Jim Cooper, MOTU's marketing director. "Digital Performer now has an internal timing resolution of about 2 trillion PPQ. This allows Digital Performer users to nudge a MIDI event by a little as one one-hundred millionth of a quarter note. And Digital Performer's new hardware-based MIDI Time Stamping technology delivers this ultra high precision with sub-millisecond timing accuracy. Practically speaking, we've turned DP's unmatched timing resolution into a wide range of useful features that DP users can take advantage of every day."

For example, users can now choose any desired PPQ timing resolution and use it throughout the program. Other MIDI sequencers have a fixed PPQ resolution, usually in the range of 384 to 1920. Digital Performer now allows the user to freely change to any resolution they want between 2 and 10,000 PPQ, with up to four decimal places. For example, Digital Performer users could choose 480 PPQ, a resolution they're familiar with from previous versions, but add four decimal places (480.0000) to achieve ten thousand times the editing resolution. Users that switch to Digital Performer from other sequencers can use the PPQ they're familiar with, such as 960 or 1920. Regardless of the resolution chosen, live MIDI data is recorded with a very high degree of internal resolution that is much greater than the PPQ values available in other programs.

MTS - MIDI Time Stamping™

To record and play back MIDI data as accurately as possible, MOTU has developed a new hardware-based MIDI streaming technology called MIDI Time Stamping (MTS). MTS is now shipping in MOTU's new line of rack-mountable USB MIDI interfaces, and it delivers MIDI data from Digital Performer to synthesizers, samplers, drum machines and other MIDI devices with sub-millisecond timing accuracy - as accurately as a third of a millisecond for every single MIDI event. Data is recorded with even higher accuracy: a twelfth of a millisecond. According to MOTU, USB makes this new level of accuracy possible with its increased bandwidth.

Complete Mix Automation

MOTU demonstrated other significant audio sequencing advancements in Digital Performer 2.7 at MacWorld, including beat/tempo-based plug-in automation. All of Digital Performer's fifty (50) included audio and MIDI plug-in effects can now be fully automated in real time. Users can change presets on the fly, and even adjust parameters smoothly with sample-accurate ramp automation (which prevents zipper noise and other artifacts produced by the buffer-quantized automation in other systems). Digital Performer's effects automation also includes discrete event automation, such as changing an LFO from a sine wave to a square wave, and stair-step automation for parameters that require it. Users can also lock many parameters to a musical beat value that follows the current tempo of the sequence. For example, Digital Performer's new stereo delay plug-in allows users to choose quarter, eighth, or sixteenth note automation separately for its left and right channel delay paths to create complex polyrhythmic stereo delay effects. Triplet/swing rhythms are also supported, as are beat values from a 64th note up to a whole note. Parameters that have been locked to beats stay in perfect time with the sequencer's tempo, and they even follow tempo changes, both instantaneous and gradual alike. Multiple effects parameters can be viewed and edited graphically in each track, and five advanced automation modes are provided, including Touch, Overwrite, Latch, Trim Touch and Trim Latch. Digital Performer's effects automation implementation is exceptionally deep, with other advanced features like mute/bypass/solo/send automation, and the ability to free up system resources when tracks are muted.

Mackie HUI Support

MOTU also demonstrated complete support for the HUI mixing control surface from Mackie Designs, of Woodinville, WA, a fully automated control surface that features touch-sensitive motorized faders. Users can call up plug-ins on-screen from the HUI, choose presets (on the fly and during recording), change effects parameters, and perform many other mixing tasks entirely from the HUI.

New plug-ins

MOTU has also revamped all of the MOTU Audio System plug-ins included with Digital Performer, giving them a completely new look and feel. Digital Performer now ships with over fifty real-time MIDI and audio effects. MOTU has added three new audio plug-ins in Version 2.7: a ring modulator, the MultiMode Filter™, and a Stereo Delay. The Ring Modulator and MultiMode filter plug-ins both feature sidechain inputs and MIDI control of their parameters for real-time control. The new Stereo Delay plug-in presents a clearly diagrammed signal path integrated into its user interface design and includes beat-based delay taps for rhythmic delay/echo effects.

More third party plug-ins for MAS

Several industry-leading plug-in developers recently announced new plug-ins for Digital Performer and its MOTU Audio System native plug-in format. Antares, the makers of the widely popular AutoTune plug-in, have introduced their new Microphone Modeler with support for MAS. This plug-in takes a source mic and makes it sound like another mic, from historical classics to industry-standard workhorses to modern exotics. David Zicarelli of Opcode MAX fame has ported his Pluggo plug-in to MAS. Pluggo not only includes 74 quality plug-ins, it also works with Cycling 74's MSP extensions for MAX, which let you build your own MAS plug-ins from scratch. Finally, TC Works has ported their widely respected Native bundle to MAS, including the stunning TC Native Reverb. All of these new plug-ins are now shipping.

Drum Editor with Rhythm Brush

MOTU also demonstrated Digital Performer 2.7's new Drum Editor. Designed to satisfy even the most demanding drum programmers, DP's Drum Editor includes many innovations, such as independent, vertically resizeable rows for each drum note and a unique note insertion tool called the 'Rhythm Brush'. The Rhythm Brush lets users quickly insert common stylistic rhythmic patterns, like "triangle" and "bongo drums", with one swipe of the brush. Users can make custom patterns of any length, too. For example, a user might record or program a drum fill that they particularly like. They can select it, make a pattern, and then "paint" the fill at other locations in their drum part. Another innovation is the ability to non-destructively shift, humanize, quantize, groove quantize and otherwise modify individual notes (drum instruments), even if they reside together in the same track. The Drum Editor can display multiple tracks and output destinations in one window, too.

Smoother audio editing during playback

Digital Performer 2.7 is now much smoother when users make change to audio tracks during playback. Users can perform almost any non-destructive edit, from splicing and dicing audio regions to dragging around automation control points, and the music keeps playing smoothly with no interruptions.

Find Tempo

Digital Performer's new Find Tempo window is a powerful new feature for anyone who writes music for picture. Users can search within a range of tempos to find the tempo that best hits all of the locked markers in their sequence. Users can assign any amount of "slop" to each hit, and they can even assign a 'weight' to each marker in terms of its importance. The Find Tempo window operates interactively with the user, continuously recalculating tempos as the user changes the search parameters or makes adjustments to the markers in the sequence.

G4 support

Digital Performer 2.7 has been extensively tested and deemed 100% compatible with all of the latest G4 Power Macs – including Sawtooth models. MOTU has also confirmed 100% compatibility with their 2408, 1224 and 24i hard disk recording systems, as well as MOTU's new line of USB MIDI interfaces.

Digital Performer 2.7 has dozens of other enhancements. Digital Performer 2.7 is being shipped as an automatic free update to all registered Digital Performer 2.6 users. Retail price is \$795. A competitive crossgrade is also available for \$395.

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