Flash Memory SUMMIT

Session 101-C
Mobile Applications

Tuesday 8:30-9:35pm

Mobile Applications

Alan Niebel, Session Chair, WebFeet Research

Ben Wu, Technical Marketing Manager, SK Hynix, “UFS Is Ready to Power Next-Generation Mobile Devices”

Elad Baram, Director Product Marketing Mobile and Connected Devices, SanDisk, “Using PCIe/NVMe in Mobile Devices”

David Ghodsizadeh, Mobile Storage Product Marketing, Samsung Semiconductor, “ UFS Presents Biggest Opportunity for Flash”

Rajeev Gulati, CTO, Data I/O, “New Programming Technology for High Density eMMC Devices”

EFD: Positioning

Solid State Storage Hierarchy

- Removable Cards / USB Drives – ext controller
- Embedded Flash Drives – simple controller + NAND in BGA-type package: eMMC, UFS
- Client SSD – sophisticated controller + NAND
- Enterprise SSD – write amp, ECC, DSP high compute controller + NAND +Host interface
- NVDIMM (in-memory) – I/F with memory bus + NAND, high end controller – flatten hierarchy

UFS: Moving EFD to High Speed

EFD Mobile Applications – Move to Speed

- Smart Phones – Need to ‘not wait’, paging, download, search & talk – dual channel UFS
- Tablets – compute function, near SSD, speed need
- Client SSD – possible low power PCIe/NVMe
- Automotive – UFS storage hub – enables WiFi, Infotainment, ADAS, soon autonomous cars
- Consumer – Camcorder, GPS, Smart Watch, Wearables, HDTV, Projector