

FACILIS TECHNOLOGY “TERRABLOCK”

Virtual-volume, High-performance, Server-direct SAN. Shared High Performance, none of the complications.

SO, STORAGE IS STORAGE, RIGHT? WRONG! TerraBlock is VERY different! Facilis TerraBlock is a high performance SAN, uniquely tailored to fulfill the real-time editorial requirements of a cross-platform mix of high-bandwidth non-linear editing systems, including both Mac-based and PC-based systems from different manufacturers! TerraBlock inverts the complexity, cost, and design issues inherent in other shared storage systems on the market. Elegance, simplicity, economy in design – TERRABLOCK targets the key needs for almost all non-linear editing installations.

VIRTUAL-VOLUME – WHAT IS THAT? TerraBlock is a virtual volume sharing storage system. Think of a “virtual volume” as an area of the TerraBlock storage created by a user via a TerraBlock software menu. Volumes are “virtual”, in that the user need not assign a specific allocation of drives that are fixed to that allocation – the user merely creates a virtual volume, assigns it a size, selects whether the volume is to be RAID protected (and, in a version soon to be released, the type of RAID), and specifies what user access may be had to the volume. A user merely has to think of the volume as a logical area of storage in which to store and retrieve data. Once created, a volume is similar to a directory that can be used and shared by clients. Within volumes, the user can create directories and read and write thousands of files. TerraBlock supports a maximum of 250 volumes.

HIGH-PERFORMANCE? TerraBlock is designed for high-bandwidth, capable of editing uncompressed streams of HD video or multiple streams of uncompressed or compressed SD video. There are three configurations of TerraBlock: the 24D (24 drives), 12D (12 drives), and 8xs (8 drives). Within each configuration there are several offerings of capacities, ranging from 2TB to 12TB per TerraBlock chassis. More than one chassis may be used in a system (currently tested to at least four chasses). The 24D TerraBlock’s current bandwidth can support 20 compressed video streams, or 16 uncompressed SD video streams, or 2 uncompressed 1080i 10-bit HD streams. The 12D TerraBlock’s current bandwidth is 8 streams of offline resolutions (e.g., 2:1 or DV25), or 4 dual-stream uncompressed SD, or 1 Dual 8-bit 1080i HD or 1 Single 10-bit 1080i HD stream. Even the 8xs supports 8 dual stream 2:1 or DV25, or 2 dual stream uncompressed 10bit SD, or 3 Avid DNxHD-220mbit HD streams. All this means you can productively edit today’s demanding resolutions with multiple clients served from common storage, without lots of restrictions.

SERVER-DIRECT SAN – WHAT IN THE WORLD IS THAT? TerraBlock is just the reverse of typical SAN and NAS systems deployed in this field by other manufacturers. Other products typically use a File Manager, Fibre Channel Switches, complex software

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loaded on both the File Manager and Client systems to manage Metadata throughout the storage system, required Ethernet network, and expensive client licenses for attached clients accessing the system. TerraBlock requires NONE OF THAT! No File Manager, no required FC switches (although FC switches are optional for facilities that require access for more than 6 or 8 clients), no complex software that must be loaded on clients (TerraBlock clients can access a small 1GB volume on TerraBlock for client software that can be run off the TerraBlock chassis or locally on the client), no required Ethernet Network, and no Client Licenses at all. Get that – no fees for attaching clients to the TerraBlock SAN! The lack of client fees alone can amount to thousands of Dollars in savings! The TerraBlock system is a server-direct system – the TerraBlock merely looks to the client system as though it were simply a local drive! The complexity is under the hood and kept away from the user – all the user does is manage the day-to-day usage of the shared volumes – essentially what would be done had it been local storage! Elegant, clean, simple to manage, essentially agnostic to operating system and/or client software upgrades on client systems, simple configuration and site preparation – almost too good to be true – but it is, read on...

HOW DOES TERRABLOCK WORK? A user with Administrative privileges accesses the TerraBlock Manager to create a virtual volume or volumes. The Administrator names the volume, specifies the size of the volume, designates whether the volume is to be RAID-protected or not (currently the RAID protection is Mirrored RAID, but soon there will be a choice of mirrored RAID or Parity-RAID), assigns user access (read-only access or write-read access), and then formats the volume. TerraBlock supports all native formats for Windows and Mac, including NTFS, FAT16, FAT32, HFS, HFS+ and XFS file systems. Notice that formatting is per volume! For instance, a user may select an HFS format for Mac only clients' use of that volume or FAT32 for both Mac OSX and Windows cross-platform access to that volume. Once created, volumes may be managed via the TerraBlock Manager (e.g., RAID may be turned off or on, user access and privileges may be changed). Users "mount" the volume(s) from their client systems, and once mounted the volume(s) are used just like local storage by the client systems. The first user with write access privilege to mount a volume will have capability to write to the volume. Other users may mount the volume and simultaneously access it, but will have read-only privilege to that volume. Once the user with write privilege unmounts the volume, the next user with write access privilege that mounts the volume and selects write access while mounting the volume will be given write privilege to that volume. Every client can be writing to the drive set, but each to separate virtual volumes. A client management tool based on user login allows user accessibility to a subset of volumes, which can follow that user room to room. In practice, this works quite well. Even for collaborative projects, a typical workflow would be to create one or more volumes to which a digitizing person has write privileges, and to have each editor create his or her own write volumes for rendering while reading from the various read-only volumes that several editors are pulling from. You may ask, where are the complexities and the hassles? The answer – under the hood and out of sight, where it should belong. How refreshing!

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BUT OUR FACILITY HAS INDEPENDENT, NON-COLLABORATIVE NLE SUITES!

Ok, so you are used to local storage only, with each room an island unto itself. But have you also gotten used to the financial waste that goes with that? With local storage, what do you do when Edit Suite C has an important project requiring more storage and Edit Suite A is idle or requires only a portion of its available storage? And further suppose the storage for Edit Suite A is formatted for MAC and that for Edit Suite C is formatted for Windows. Or even suppose that the two suites' local storages are physically incompatible, foreclosing the possibility of moving one into the other's room. Essentially, using local storage is akin to tethering yourself to a boat anchor – no flexibility, up or down only. With TerraBlock, reallocating storage between Edit Suite A and C is as simple as a few mouse clicks! Having the ability to reallocate storage may mean you actually can get by with overall LESS storage than what you'd otherwise pay for local storage!

Moreover, is your island really an island? With local storage, are you retaining multiple copies of stock libraries or effects that otherwise could be placed in one common volume readable by all TerraBlock clients, whether MAC or PC? Further, with TerraBlock it would be only a few mouse clicks to allow Edit Suite A to digitize footage for Edit Suite C's use, enabling Edit C to immediately commence work on the next important job once his current project is finished. In reality, not every editor or project is equal – would you not want the flexibility to adapt to changing circumstances at the click of a mouse as opposed to moving heaven and earth? And good gosh, what if you ever really encountered a situation where a project needed collaboration in a truly shared environment? Answer, TerraBlock!

Efficient use of storage assets between clients means no space wasted on a single client. There's a single location for maintenance, media management and administration on any centralized volume. Allocation of storage between rooms requires only software administration, and can be done while the systems are running. Projects can migrate between rooms without risk of incompatibility, or the risk of hardware failure from "sneaker net". Storage can be added well past the limitations of SCSI chains; terabytes of space can be allocated to a single system. Drives and noise are centralized away from the system, and the clients. This adds to drive life by lowering dust, heat, and vibration. Volumes are pre-optimized for maximum performance without striping on the client; the smallest volume has the full bandwidth of the system.

BUT I ALREADY HAVE ANOTHER MANUFACTURER'S SAN! Do not fret. TerraBlock can coexist with certain other manufacturer's SAN systems. Clients merely need the availability of a card slot for the TerraBlock Fibre Channel card that will not conflict with their NLE application. This may even be a way to expand your storage configuration and still afford to buy additional editing systems with the money left over from the expansion!

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I ALSO NEED TO GET FILES FROM GRAPHICS SYSTEMS INTO THE NLE STORAGE. No problem - we have an optional Ethernet Bridge to enable non-real-time clients such as graphics systems to send files to/from TerraBlock via your company's Ethernet LAN.

OH, DID WE FORGET TO MENTION "ROBUST"? TerraBlock's drives are hot swappable with automatic recovery of a failed drive. Virtual volumes can be selectively mirrored for full protection of data. The 24D and 12D TerraBlock systems ship with redundant power supplies. TerraBlock systems ship with between 2 and 4 hot swappable fans, up to two blowers, and two high-speed fans on the back panel. Any one of these can be disconnected for any length of time to facilitate replacement. A spare on-the-shelf drive is shipped with every system. And the initial purchase includes a year of hotline and version upgrades.

AND DID WE MENTION "ECONOMICAL"? Storage done right can also be storage done economically! We have seen some other manufacturers' shared storage systems priced at multiples of what TerraBlock sells for! TerraBlock pricing is far more economical than you may think – ask us for a specific quotation for your facility.

TERRABLOCK SUMMARY:

1. Shared Storage that is simple to connect and support. No need for File Managers, Ethernet network, complicated SAN software running on client systems, etc.
2. TerraBlock supports a cross-platform mix of client editing systems, including PCs and Macs on the same storage! For instance, you can have both Final Cut Studio and Avid systems on the same shared storage, all editing in real-time!
3. High-bandwidth, supporting multiple NLEs at demanding resolutions.
4. Volume-sharing and Server-direct - a much simpler and very efficient method of sharing data for non-linear workflows, and far better than just local storage.
5. Works with Apple's Final Cut Studio, all Avid editing products, and many other PC-based and Mac-based NLE and graphics systems.
6. You can connect more than one TerraBlock system together to gain storage and client capacity, and you can add TerraBlock to certain existing SAN systems.
7. Add an Ethernet Bridge to gain access to TerraBlock for non-real-time clients.
8. Simple, elegant, economical, and efficient.
9. No license fees for adding clients!

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SO IS TERRABLOCK FOR YOU? We hope this brief explanation has given you pause to consider how storage done right could become a *huge improvement* in the way you do business! Seize this moment, call us now, and maximize your possibilities!

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