

Storage Bridge Bay Working Group

Frequently Asked Questions

April 17, 2007

What is the Storage Bridge Bay Working Group?

The Storage Bridge Bay Working Group (SBB) is a nonprofit corporation formed by industry members to develop and distribute specifications to standardize portions of storage enclosures. The first specification released by the SBB is The Storage Bridge Bay Specification Version 1.0. The SBB is currently working on Version 2.0 of the specification and in planning to release Version 2.0 in late 2007.

Who are the members of the SBB?

The founding members are Dell, EMC, Intel, and LSI. Joining the founding members on the SBB Board of Directors are IBM, NetApp and Xyratex. SBB contributor members are: Accusys, Adaptec, AIC, AMCC, AMD, Aristos Logic, Astute Networks, Celestica, Inc., Chenbro, Digi-Data, Dot Hill, Emulex, EqualLogic, Infortrend, Inspur, Inventec, iStor Networks, Inc., Mellanox, Mitac, NEC, Neterion, Newisys, PMC-Sierra, Quanta, Rasilient, Seagate, USI, and Wistron Corporation.

What is a Storage Bridge Bay?

A Storage Bridge Bay is a slot/canister pair in a storage hard drive enclosure that contains the electronics that give the storage enclosure its "personality." SBB compliant electronics packages (a.k.a. bridge/controller cards) are encapsulated by the containers that slide into SBB compliant slots in a storage enclosure. Examples of bridge/controller cards that can be designed to fit into a storage bridge bay include JBOD interface bridges, RAID controllers, iSCSI controllers, network attached storage controllers, etc. The term Bridge Bay was chosen by the SBB to emphasize that the working group is standardizing the physical and electrical interface requirements of the bridge/controller cards and not the primary functions provided by these cards.

What is the purpose of the SBB Specification?

The SBB Specification is designed to act as a reference and guideline for storage solutions providers who would like to have bridge bay compatibility between their storage solutions. The objective is to define mechanical, electrical and low-level enclosure management interface requirements for an enclosure bridge bay that will support a variety of bridge/controller cards from a variety of hardware vendors. A storage bridge/controller card design based on the SBB specification will be capable of operating within a storage enclosure with slot designs based on the same specification and supporting the same specification options.

What does SBB 1.0 Specification standardize?

The Storage Bridge Bay Specification Version 1.0 standardizes many physical, electrical, and enclosure management characteristics of the slots and canisters that hold the intelligence of storage enclosures. Examples of the requirements included in the specification are:

- the board volume constraints (e.g., length, width, height) and the physical limitations imposed on bridge/controller cards that will reside in the bridge bay;
- physical dimension, placement and electrical characteristics of the connector that attaches a bridge/controller card to the disk enclosure backplane;

- connector pin-outs with signal names and functions;
- power and cooling to be provided to bridge/controller cards that will reside in the bridge bay;
- enclosure management interfaces provided to the bridge/controller cards;
- vital product data to electronically identify components and configurations of the storage enclosure.

What is not standardized by the SBB 1.0 Specification?

The SBB Specification Version 1.0 does not define:

- host interfaces used to connect the bridge/controller cards to outside computers or networks;
- exact functions and board design of bridge/controller cards provided by different vendors;
- physical characteristics of the entire enclosure;
- enclosure air flow and cooling required;
- enclosure drive carriers;
- enclosure power supplies.

When was the SBB 1.0 Specification released?

The SBB Working Group released the SBB Specification Version 1.0 in September, 2006.

Where can the SBB 1.0 Specification be obtained?

The SBB Specification Version 1.0 can be downloaded from the sbbwg.org free of charge.

How much does the SBB 1.0 Specification cost?

There is no charge for the SBB Specification Version 1.0. The specification is available for free download at sbbwg.org.

How does the SBB 1.0 Specification benefit the storage industry?

The SBB Specification Version 1.0 benefits the storage industry as a whole in many ways. A standardized bridge bay allows IHVs of storage electronics packages to create a single design that is compatible with a number of disk enclosures, helping to lower development costs. The IHVs also have the benefit of designing to a known standard that should shorten development cycles. Also, testing to an industry standard should improve the quality of their solutions. ISVs benefit from the connector and enclosure management interface compatibility provided by the SBB specification. The SBB specification lowers the amount of enclosure specific code ISVs need to develop to be compatible with different disk enclosures. Storage solution providers benefit by having shorter integration cycles with the solutions provided by different IHVs and ISVs.

How does the SBB 1.0 Specification benefit end customers?

End customers should see increased quality because IHVs, ISVs and storage solution providers will be developing and testing to a known standard. The potential lower development costs seen by ISVs, IHVs and storage solution providers could lower the cost of a storage solution. End customers should have faster access to new products because of the shortened development cycles. End customers may also see a greater range of product offerings. Finally, end customers benefit from the increased competition that standards can provide.

When do you expect the solutions supporting the specification to hit the market?

A number of companies have release products that utilize the SBB Specification Version 1.0. These companies include Dell, IBM and LSI.

What is the SBB Working Group doing now?

The SBB is working on the next version of the SBB specification. The SBB intends to complete the SBB Specification Version 2.0 in late 2007.

What enhancements will the SBB 2.0 Specification incorporate?

While the SBB Specification Version 2.0 is in development, there are no guarantees on what features will be incorporated in the released version of the specification. However, the SBB is currently working on the following enhancements:

- Common SBB canister design
- Support for higher power components
- Additional requirements for greater interoperability
- Incorporation of next generation disk interface technology
- Support for high density disk enclosures

How can I find out more information about the SBB Working Group?

Please visit the SBB web site at www.SBBWG.org to learn more about the SBB Working Group.

How do the SBB's and the SNIA's efforts relate?

The Storage Networking Industry Association and the Storage Bridge Bay Working Group are both organizations that develop storage standards. The SBB Working Group is focused on electrical and mechanical interfaces within the storage hardware platform. The SNIA standards work is focused on a wide range of data management and storage network technologies. The SNIA and the SBB Working Group see their efforts as complementary and non-overlapping.