

## Conferencing & Distance Learning

With StarBoard's advanced networking facilities, you can conference with colleagues and students across the hall or around the globe. You can participate in seminars and strategy sessions anywhere, over LANs, dial-up lines, even the internet. StarBoard software manages networking details behind the scenes, ensuring that your view of the proceedings is accurate and up-to-the-moment.

## Digital Data Conferencing (DDC)

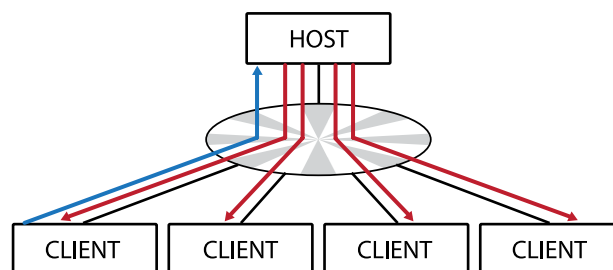
Data Conferencing is an integrated module found within StarBoard Software which allows users from different locations to connect up to 50 StarBoards (including Host). This option allows StarBoard users to work together in real time on the same screen by making annotations and exchanging documentation. This service is free of charge and can be easily used by all StarBoard users to make collaborative distant work more efficient.

## DDC Structure

In a StarBoard Software DDC session, data will be sent to the Host first (blue arrow), and then distributed to all clients including the originator of the data (red arrows). As the number of clients increase, the bandwidth requirement at the host site is also increased. StarBoard Software will always try to use available network resources.

## Bandwidth

The following is an approximate data requirement for each arrow on the diagram above. Host bandwidth will be dependent on the number of Clients (see diagram).



### Operation:

Annotation:

Sending image:

Sharing PPT:

Idle:

### Data size

2~6KB/s. (A simple line – Drawing a figure)

Depends on image size and network speed.

First, the .ppt file is sent. After that, StarBoard Software only sends small packets (less than 1KB) to synchronize the data.

StarBoard Software sends small packets (less than 1KB) to keep the connection alive after each 30 seconds of idle

## Fact Sheet and FAQ

### What is Digital Data Conferencing (DDC)?

- A conferencing feature in the StarBoard Software that allows you to connect up to 50 different StarBoards (including Host).
- Applications: Distance Learning, Presentations, Collaboration, Brainstorming, etc...

### How does it work?

- DDC uses your existing internet connection and IP address to establish a peer to peer connection with other StarBoard users anywhere in the world. A session with up to 50 simultaneous connections can be supported (including Host).
- The host will start the session and give out his IP address. Clients can then input that IP address into the DDC configuration page and connect to the host. Host can then accept or reply the incoming connections.
- All participants must have StarBoard software installed to conference, if they want to annotate they need to be connected to StarBoard hardware, otherwise they can only view the conference.
- DDC only displays what's happening in the StarBoard Software, i.e. if you want to show a document, image, or PowerPoint it must be imported into the software because you cannot show your desktop.

### What is the required bandwidth?

- Bandwidth depends on the amount of clients and also the types and sizes of documents being displayed.
- Example: The host and 1 client drawing on a text page together will be faster than a session with a host and 10 clients annotating on the same page.
- Bandwidth also depends on the internet connection speed of each client. High speed internet is recommended, but it will work with dial-up.

### How much does it cost?

- DDC is bundled and integrated into the Starboard Software 8.11 and earlier versions for free.
- No additional licenses need to be purchased, but if conference participants want to ink or annotate they need to be connected to a StarBoard or purchase a software license.

### Security

- DDC does not have encryption. Security is dependent on the security settings, communication protocols, and network configuration of the end-users location.
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## StarBoard Software 8.11 Specifications

- Software Version:** Available for StarBoard Software Version 8.11 and 8.0 or later
- Operating System:** Windows 2000, Windows XP, Windows Vista (latest service pack recommended)  
Does not support 64 bit

### How fast is DDC?

Below is a table of processing times if running on the recommended PC and networking environment. This assumes there is no other software running, and no other packet on network. (This time may be different on your environment, it is only a reference)

#	Operation	10 connections	40 connections
1	Call participants from host (no pre-documents)	20-30sec	100-120sec
2	Additional connection from Participant (no pre-documents)	10sec	10sec
3	Annotation	1-2sec	2-3sec
4	Go previous/next page	2sec	2sec
5	Move write permission	2sec	3sec
6	Send PowerPoint file	2MB:14 sec 20MB:120sec	2MB: 27sec 20MB:240sec
7	Send Excel File	61KB:11sec	61KB:11sec
8	Send Word File (Pages & Size effective)	23KB:13sec	23KB: 18 sec 5.7MB ( 56pages) 10min 55sec 11MB (1pages) 65sec
9	Exit	12sec	12sec

### Recommended Network Environment and PC Requirements

- (1) 100Mbps or above network  
(Effective speed should be 30Mbps or above)  
Recommend using a switching hub if there are over 5 connections.
- (2) Host PC should have higher specifications when hosting over 10 connections/clients  
CPU: Pentium 4 3.0GHz or above  
Memory: 1GB or above  
HDD: 300MB of free space