

# Macromedia Flash Communications Server MX (also known as "tincan")

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### What is it?

A server letting Flash MX authors create movies that share—in real time—data, video, and audio. Anyone with the free Flash Player 6 can view these creations.

### What can it do?

Obvious uses include video conferencing and collaborative work applications. For example, an ad agency can create a shared whiteboard to let several people make comments on a proposed layout. In addition to real-time sharing, you can also record information so that others can view a meeting after the fact... or so people can post messages (video, audio, text, graphic) at a convenient time.

There are also lots of immediate uses in education. You can build a teacher-student application that gives the instructor extra powers so they can control what is viewed by each student. For example, a chat application could allow the teacher to chat with each student individually or selectively call on a student to share their question with the other students. Similarly, a live tech-help application can let support personnel conduct simultaneous private sessions with several customers.

The wide range of existing features in FlashCom will give people a chance to come up with all kinds of interesting applications—more than anyone can imagine right now. Keep in mind that although live video is the most exciting feature, simply sharing data in real-time is super powerful. Add the fact that the user interface is built in Flash (which has a huge user base) and you should see that the potential is great.

See my sample application: [www.phillipkerman.com/machine](http://www.phillipkerman.com/machine)

### How do you make it do that?

To deliver an application you simply post your .swfs and supporting .html files onto a web-server as you do with any Flash application. In addition you need a Windows 2000/XP/NT4 SP6 based web-server running a licensed version of FlashCom (UNIX versions will ship later this year).

Building a FlashCom application is scripted entirely in Flash MX using the ActionScript language. You can also use a set of "Flash Communications" components to—in minutes—snap together sophisticated FlashCom applications with—literally—no scripting. In addition there's a new set of ActionScript for server-side logic that gets stored in a simple text file on the server. Many tasks don't require any server-side ActionScript although often a tiny bit of server side ActionScript can go a long way to simplify certain types of projects. For example, in a card game application the script to perform the role of a dealer is best suited for the server as any one client could drop out leaving everyone else stranded.

Components include: "Simple Connect" to ascertain a user's name; "Chat" for a typical live-chat; "User Color" to give each user's text an identifiable color; "People List" to show who all is currently connected; "Video Conference" to make a multi-user video chat application; and, "Set Bandwidth" to optimize quality and performance by letting users specify their connection speed.

The new ActionScript on the client side (that is, in Flash) includes the following objects:

NetConnection lets you point to a FlashCom server, define how to handle events received from the server including "onStatus", and finally connect to the server. Nearly every other object then connects to your NetConnection instance.

SharedObject (remote) is similar to local shared objects as data is stored in a file. However, several clients can connect to a single remote SO. Plus, any time a client changes an SO, all connected clients are notified. Also, SOs are one way for clients (or the server itself) to trigger functions in other clients or at the server.

NetStream objects each establish a one-way stream of audio and or video. For two-way video you simply need two NetStream instances. One client can publish a NetStream (either live or to be recorded) and then another client can make a NetStream instance subscribe to (called "play") a named stream (being published by the other client).

Camera and Microphone Objects let you set properties of the user's webcam (like frame rate, quality, and motion level) or their microphone (such as echo level, silence level, and gain). You can attach a Camera object to a video instance on screen but in order for other clients to see the picture and sound you'll want to attach the Camera and Microphone to a NetStream being published. To view another client's camera you just attach an incoming NetStream (one being played) to a video instance.

Additionally, Server Side ActionScript (which, I suppose, is all new) has several additional objects.

### How much does it cost?

Personal Edition (maximum 10 simultaneous connections and 1 Mbit/second): \$499  
(Additional Personal Editions—up to 5—will increase limits linearly.)

Professional Edition (maximum 500 simultaneous connections and 10 Mbit/second): \$4500  
(Additional "expansion packs" add 500/10 to the Pro version only and cost \$4000 each.)

You also need Flash MX (\$499 or \$199 upgrade) to author FlashCom applications.

Additionally, hosting will be available from **www.mediatemple.net** (and others later).

### Where can you learn more?

A presentation showing Macromedia's positioning of the entire MX product line:  
[www.macromedia.com/software/mx/presentation/](http://www.macromedia.com/software/mx/presentation/)

A great article exploring scenarios and applications for FlashCom:  
[www.macromedia.com/desdev/mx/flashcom/articles/comserver.pdf](http://www.macromedia.com/desdev/mx/flashcom/articles/comserver.pdf)

Jumping off point for technical information including security:  
[www.macromedia.com/desdev/mx/flashcom/](http://www.macromedia.com/desdev/mx/flashcom/)

General product information:  
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