

ABSTRACTION

Macromedia Director is a popular multimedia authoring tool among multimedia developers. Although it has many great capabilities, it cannot provide every single need of every individual developer, for instance database connectivity and auxiliary input devices—e.g., joysticks and gamepads. Fortunately, Macromedia have created a framework called the “Macromedia Open Architecture (MOA)” that enables third party developers to create their own extensions—Macromedia call them “Xtras”—to extend the capability of Macromedia’s products.

Database connectivity, which is a lack of Macromedia Director, is necessary for today’s applications and multimedia titles. Database provides a standard and efficient way to store, retrieve, and manipulate data. Auxiliary input devices handling, which is also a lack of Macromedia Director, is also necessary for today’s interactive multimedia titles and especially games.

Using the Macromedia Open Architecture (MOA) Xtra, the database connectivity and input devices handling capabilities can be added to any Macromedia Director movie. Equipping Macromedia Director with these Xtras will make it even more versatile.

Microsoft ActiveX Data Objects (ADO) is used to develop Database Connectivity Xtra (DXtra). Two of its most important objects—the Connection and the Recordset objects—are incorporated into the Xtra. The ADO Connection object is responsible for handling the connection to data sources and executing queries. If an executed query happens to return records then the ADO Recordset object holds them. This object provides navigations and record fetching methods so applications can retrieve the information it holds.

Microsoft DirectInput, a part of Microsoft DirectX, is used to develop DirectInput Xtra (DIXtra). The Xtra can handle one joystick or gamepad for use with Director movies. DIXtra provides methods for monitoring the current state of the input device. Any Director movie can call these methods to get the required information—e.g., the axis position and the buttons’ states. The Director movie can then react based on the information.

Via DXtra and DIXtra, a Director movie can now interact with a database and get a response from a joystick or gamepad. It means that creating a database supported multimedia title or a joystick driven game using Macromedia Director is no longer difficult—if not impossible.

Being developed from ADO means that DXtra can practically connect to any data sources having OLE-DB providers although it has only been tested with a few data sources. DIXtra is extensible to support Action Mapping—a new feature in DirectX 8.0—that enables binding actions to virtual controls.