

# Using Rocket Network/DigiStudio

Scott Christie straps himself in for some online collaboration, and lets us know how it's done.

Having recently reviewed the Digidesign Mbox audio interface I also managed to get my hands on the accompanying ProTools LE 5.2.1 software that now supports Rocket Networks' virtual studio technology. Rocket Networks is a company that has set themselves up as the defacto standard in utilising the Internet for collaborative online audio production. While this article employed DigiStudio – Digidesign's implementation of the Rocket Network technology – it's important to note that other companies such as Emagic and Steinberg have also integrated Rocket technology directly into their applications, so many of the concepts discussed in this article are equally relevant to Logic and Cubase users.

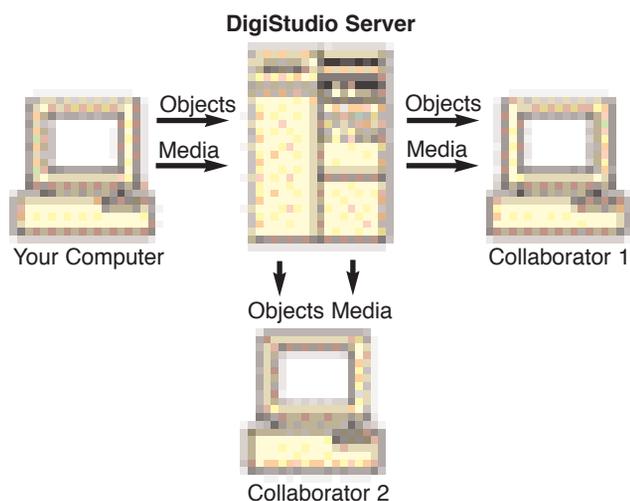


Figure 1 – DigiStudio Data Flow

The key word in appreciating the implications of this technology on the future of audio production is *collaboration*. For the composer, the virtual studio concept allows you to work with any other musician (or group of musicians) on the planet who are also armed with the relevant software and an Internet connection — preferably broadband for the sake of your sanity! This collaboration can involve the complete co-writing of a piece of music or simply the ability to book a guitarist from out of town to remotely record a guitar part.

On a grander scale, its usefulness in the co-ordination of large-scale projects such as film and video productions is obvious as it allows the various production members such as the composer, audio editor and director to constantly preview and edit audio material, despite the fact that production schedules often dictate that none of these people are ever in the same city – let alone country.

An example of this on the mega-rockstar level saw engineers working for U2 recently using ProTools/DigiStudio during the pro-

duction of an upcoming live concert DVD. DigiStudio was used to connect Effanel Studios in New York City – who taped the concert – and Abbey Road Studios in London. Gigabytes of 5.1 surround mixes were sent from Effanel to Rocket Network's offices in London. The mixes were then delivered to Abbey Road where the band successfully reviewed, tweaked and finalised the mixes.

## Overview – Rocket Flight Plan

Figure 1 shows the basic data-flow model of DigiStudio. Track data — referred to in the diagram as *object* data — containing information relating to regions, edits, plug-in instances, mixer settings etc is uploaded or *posted* from your local session to a central server along with the media files which are the actual audio, Midi and video files used in the online session. Other users can connect to this online session and download a copy of the session to their local ProTools systems. Changes can then be made locally by anyone participating in the on-line session such as: the recording of new tracks, editing of existing tracks, addition of automation and effects and final mixdown, for example, and these changes can then be posted to share with other users. Each local session is then dynamically updated from the central server as changes are made, provided the local session remains connected to the on-line session.

There are three software components within the DigiStudio environment that allow for all of this to happen: ProTools, the DigiStudio Control application and your trusty web browser. As the saying goes... a screenshot paints a thousand words, so at this point I'll refer to Figures 2 and 3.

Figure 2 (on the following page) shows the ProTools Track interface including the additional Net View controls that affect Track Receive Audio Quality, Post/Receive activation and Track Data Receive options (more on audio quality later).

Figure 3 (also on the following page) shows the DigiStudio Control application that manages the co-ordination of files behind the scenes and allows you to chat with other users in an online session. The final component is your web browser which is where you manage your DigiStudio account, navigate online projects, sessions and mixes, and search for, locate, and message other users. This bit is a tad vast to capture in screenshots but you should basically get the overall concept at this point. An interesting aspect of the web browser component is the ability to search the DigiStudio network for other users based on their *talent profile*. Every DigiStudio account user has one of these and it essentially profiles your location, skills and demos. This then forms a searchable database for new collaborations.

## Data Compression – Free, Free, Free!

At this point someone has to be wondering how (even with broadband connection speeds) any of the above can be accomplished in anything resembling real time during the course of a typical 24-track session. Well, in order to make the online sessions zoom along, Rocket Networks employ a data compression technol-

ogy known as Vorbis. The Vorbis codec reduces an audio file size by as much as 12:1 – similar to mp3 in this regard. When ProTools imports data-compressed audio files posted from the web it first converts them locally into uncompressed PCM audio linear files that can then be run inside ProTools.

There are three audio quality options available for the posting and receiving of audio within the DigiStudio environment: *Source* leaves the audio in its original uncompressed file format, typically 16- or 24-bit 44.1k or 48k AIFF or WAV files; *Standard* uses moderate compression of 6:1; and *Preview* employs the maximum 12:1 data compression for minimum upload and download times. The overall concept is that you collaborate with either Standard or Preview compressed audio files material in the writing and tracking stage and then download all the relevant audio at Source quality when it comes to mixing.

An interesting angle to the choice of Vorbis as the key data compression codec for the Rocket Network is that unlike MP3 or AAC (which are owned by the Fraunhofer Institute and Dolby Laboratories respectively), Vorbis is open source code and free. The upshot of this is that user accounts for DigiStudio are not subject to the additional on-costs of paying these companies the expensive licensing fees for the use of their codecs.

### But how much does it cost?

Speaking of costs, there are three different account levels that determine what you can do within the DigiStudio environment.

A *Free User* can listen to and contribute to any public sessions, but this account is essentially only for testing and experimentation with DigiStudio.

A *Pro User* can listen to and contribute to any private sessions which you have permissions and the ability to post sessions to public and private projects which you have been assigned at least Create permissions – this seems to be the one for the roving virtual session musician.

Finally, the *Private Account* provides all the privileges mentioned earlier as well as the ability to create private projects and sessions and determine permissions for who can participate in the private projects and sessions you own.

The pricing structure of a DigiStudio Private Account – which is obviously the one for any serious applications – is similar to the pricing for mobile phone plans in that you typically buy a monthly plan based on how much usage you anticipate. Usage is based on data transfers – the amount of media files uploaded and downloaded through the network; and storage – the amount of media file storage space used on network servers. If you go over either the data transfer or storage limits of your account plan, then you will be charged extra on a per megabyte basis.

As an alternative there is also the DigiStudio Pay-As-You-Go account, which is a 12-month account with no monthly charges – pay only for what you use. You are charged for the amount of media (per megabyte) you transfer and store on the server. This is a good option if

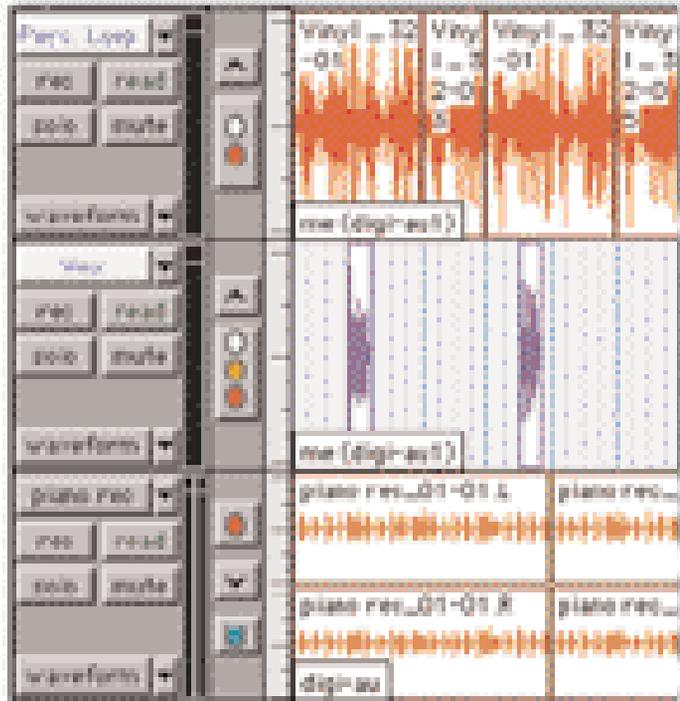


Figure 2 – ProTools Tracks including the additional Net View controls which affect the compression algorithm quality of the track, activation of posting or receiving additional data and options for the type of track data to receive.

you are not using DigiStudio on a very regular basis yet. For more pricing details head for:

[www.digipronet.com/index.cfm?page=digistudios/PricingFAQ](http://www.digipronet.com/index.cfm?page=digistudios/PricingFAQ).

As a quick rap I can say that participating in a brief online writing session recently with Charles Tetaz from Digidesign was very rewarding and was a very different experience to, say, two musicians sitting around one computer. A single computer tends to define the roles of performer and engineer more stringently, whereas two musicians creating within the same session environment leads to a very different interaction — particularly in terms of the speed that a song idea can suddenly come together. Exciting stuff indeed.

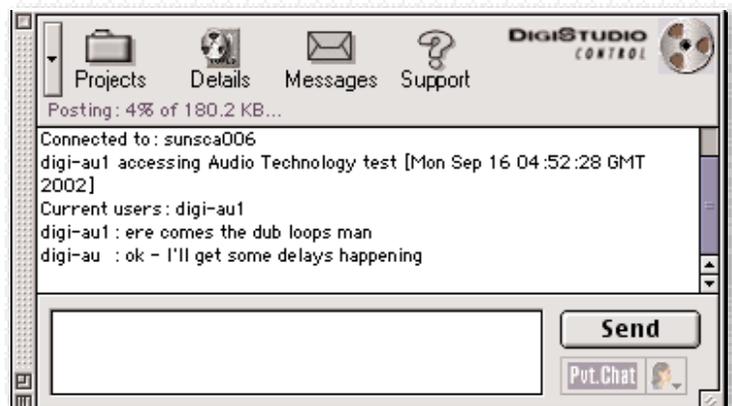


Figure 3 – The DigiStudio Control application