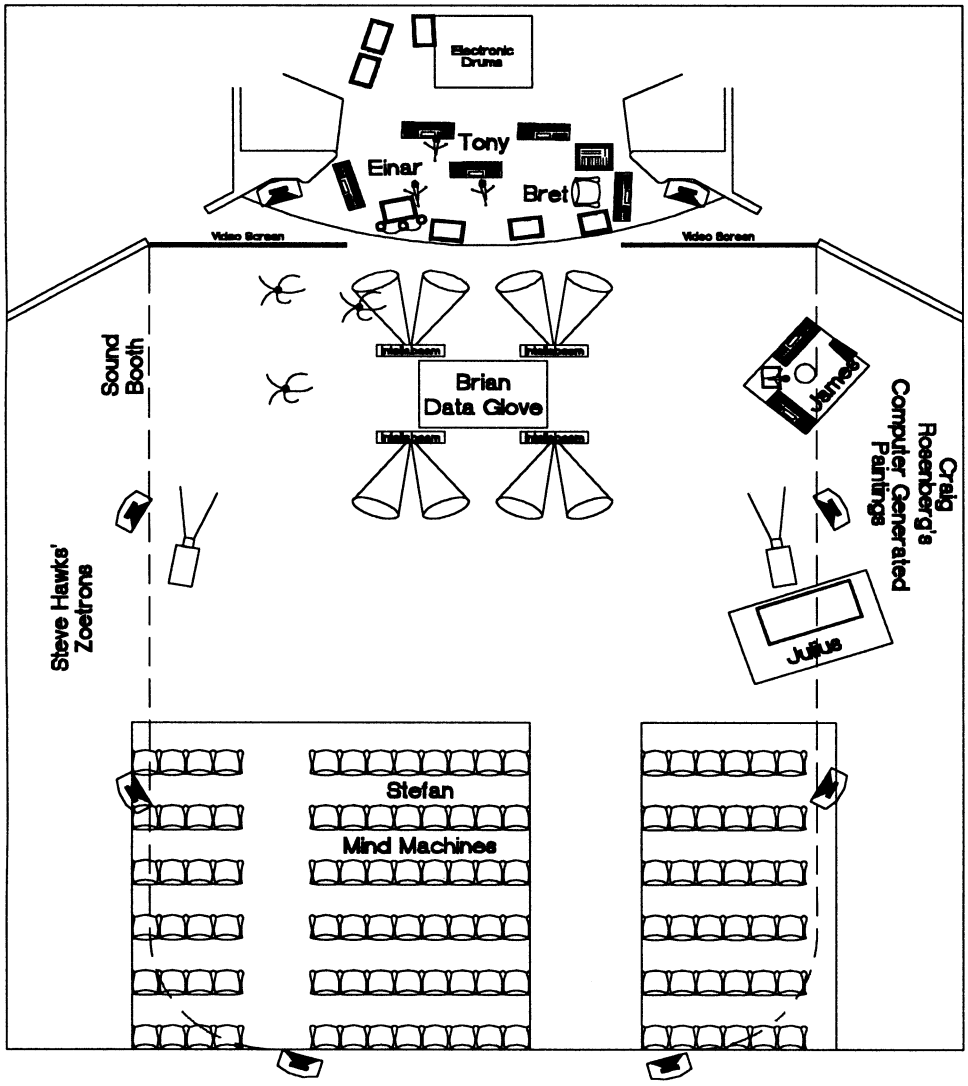
The Northwest CyberArtist

November, 1993 Volume One, Number Ten

AS INTERACTIVE AS THEY WANNA BE...

Smiling faces, adults playing like children, ooh's and aahh's. These were were some of the reactions gleaned from the audience at Synesthetics: The 1993 Seattle Art and Technology Festival.

We learned from our experience that people have different approaches to interactivity; and fortunately our show could appeal to most of them. As an audience member you could take to the mind machines and have a totally passive experience or get up on the glove stage and control the lights for the whole room.



You can tell people are ready for the new tools they played with. I was thrilled at the skill and grace most brought to the foreign experience of using the glove controller.

As a group we thank everyone who worked so hard to make this show a reality. (Especially the staff at On the Boards!) The success of this years show ensures a Second Annual Art and Technology Festival!

Here is a peek behind the scenes with the room layout below and the audio block diagram on page three.

NOVEMBER MEETING:
MONDAY, NOVEMBER 1

THE ART INSTITUTE OF SEATTLE ROOM 717/718
2323 ELLIOT AVENUE
7:30PM

"OUR GUEST HOST"
STEVE SHERRARD

"OUR GUESTS"
SPECTRAL SYNTHESIS: KEN ANDERSON AND GARY TOBIN WILL BE DEMONSTRATING THE AUDIO ENGINE, A SIXTEEN TRACK DIGITAL AUDIO WORKSTATION WITH FULL AUTOMATION AND DIGITAL SIGNAL PROCESSING

COMING IN DECEMBER:

JEFF BERRYMAN, EXECUTIVE DIRECTOR OF CENTRE FOR IMAGE AND SOUND RESEARCH, FROM VANCOUVER, B.C.

PUBLISHER'S CORNER

by Steve Turnidge

Well, here we go yet again into the brave new world. The future is up to our knees now, and we are being prepped to start swimming in the digital river.

Last month I wondered what a good title for me is in our group. Within a day of publication **Gordon Rapheal** called me from on the road with **Sky Cries Mary** in Spokane. He came up with the winner -- **Host.**

That works for me. it also allows me to announce a *guest* host for our October meeting: **Steve Sherrard. Spectral Synthesis**, who recorded our Saturday Synesthetics show on 9 gigabytes of hard disk, will show the latest in the state of the art of hard disk recording. I regret having to miss this one.

I will see you at our December meeting, however. At that time Jeff Berryman will be down from Vancouver, B.C. with some of his mates and mind expanding tales and ideas from his work around the globe.

Till then, Enjoy!

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A Severed Heads Video-to-MIDI Application

by Amy Mazurek

An experimental group from Sydney, Australia called Severed Heads are delving into interactivity. In 1990 they toured the US and Canada with MC900 FT JESUS. Many of their recent releases aimed for the dance market, but earlier (late 70s through mid-80s) sonic explorations came from sampling doodads, synthesizers and the occasional psychedelic feedback lead guitar. Now, they seek recognition (and perhaps fortune) by expanding into the maddeningly complex, explosive MultiMedia market. The following excerpt from a recent newsletter that they publish indicates the ideas which they would expand.

Chasing Skirt on the *Rotund for Success* album is a section of the sound generated by our installation for the 1988 Australian Biennale — a system which illustrates many of the ideas we hold dear. It was responsive to the audience and required no performers. It drew a distinction between video and other forms of moving pictures. While it was powered by sophisticated electronics, the principle of operation was simple, and once understood, added to the pleasure of exploring the work.

The installation occupied a lock-up about the size of a lounge room, with a thick wooden gate at the front and heavy shelving around the remaining three walls. The antiquity of the environment was at odds with the equipment inside: four video monitors, a computer, video synthesizer and an array of music keyboards.

The music generated by the system could be heard all about the gallery, to the pleasure of some and the disgust of others. Entering the room, the audience was confronted by the two main video screens. These displayed several layers of images at a time, some recorded and some synthetic. The recorded images were of bushland, the fringes of the city and the center, working up to a frenzy of cranes and pile drivers before flowing out to the countryside again. Another screen displayed a view of the lock up from a camera in the ceiling, with areas marked out in red borders. The fourth monitored the computer which controlled the system.

Soon after entering the room, the participant would understand that the red areas displayed on the third monitor corresponded to events int he sound and vision. for example, the areas near to the door triggered fundamental low notes in the melody and comparatiely uncluttered vision. Deeper into the room, the music and sound took on extra layers. It was possible for the participant to 'play' the system in a sensible way and most people eventually did that. Examples -- a father and children arranged themselves in the room to play a chord on one instrument. One woman was seen roll-

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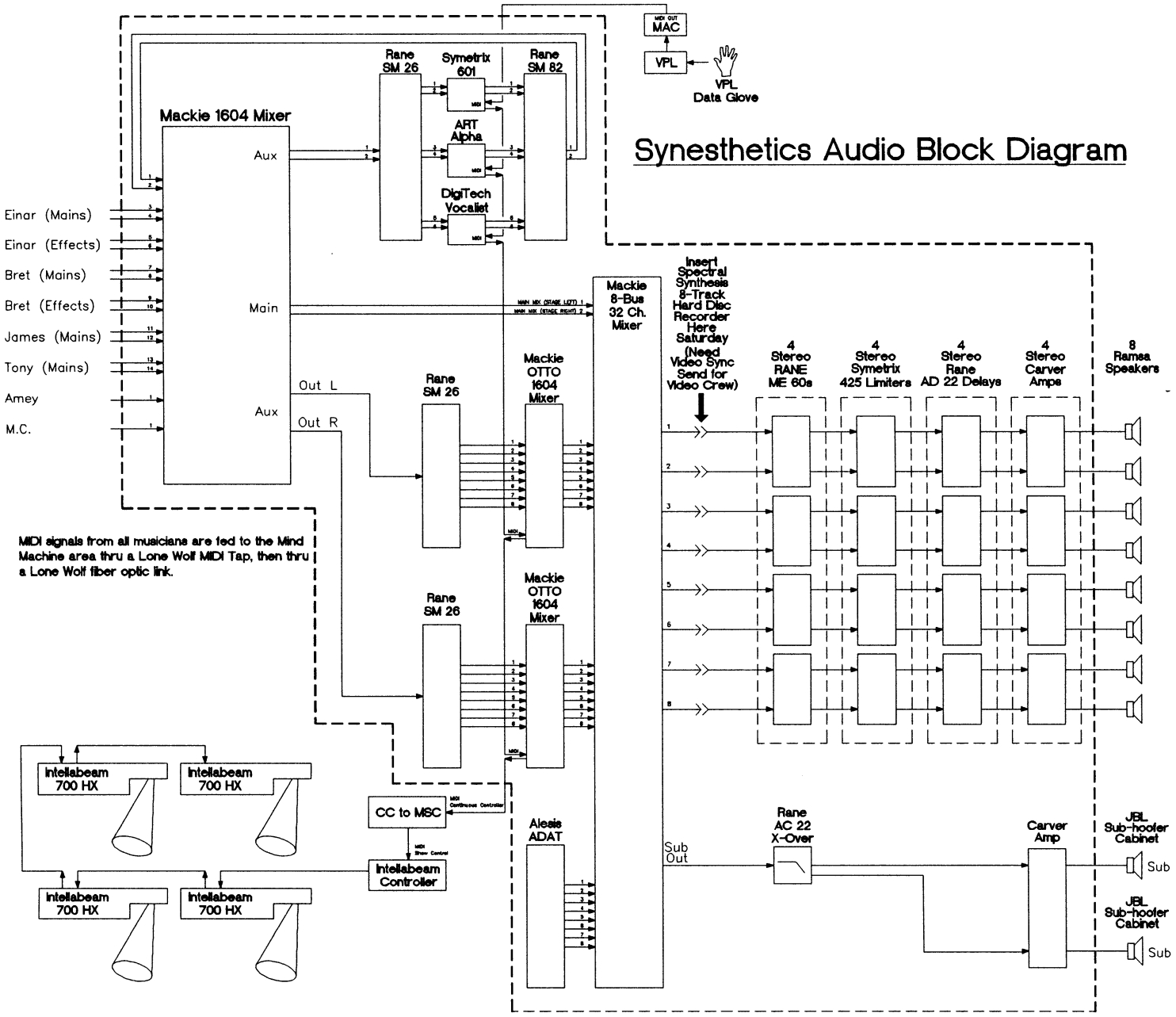

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ing a pram around and around in the room to build up repeating melodies.

The heart of Chasing Skirt was 3DIS, a device created by Perceptive Systems in Melbourne, Australia. 3DIS is made up of hardware that is installed in an IBM AT computer and the software and controls the system. 3DIS can monitor a number of cameras. Each camera feeds to an image storage board. This board repeatedly grabs and hold an imge while the computer scans though each grab and examines the manner in which this image has changed form the one before. Areas of the image are defined by the user, these are the areas bounded in red in Chasing Skirt.

3DIS examines each area or 'gang' to see if the overall light intensity of the gang has chaned from a given level. Usually the given level is that when the gang is empty — no object or person is in that part of the image. when someone enters a gang the light level is changed and 3DIS triggers an event. 3DIS is presently arranged such that the events are 'expressed' in MIDI.

In Chasing Skirt we only used the most basic MIDI signals, Note On and Note Off, which were sufficient for this application. But the addition of video control required some unique modifications. MIDI has 16 channels avaliable for musical control. A 'Mythical Channel 17' was invented which had meaning to Stephen's videosythesizer. Surprisingly enough, this extra channel worked OK first time except a few signals turned up upside down and back to front, much to the confusion of all. The net result — 3DIS saw the people and performed and the people saw 3DIS and performed, and this fed back into the system again.

THE JOY OF DOING IT YOURSELF

by Steve Sherrard

Are you an artist with an urge to express yourself, but without the supporting personnel or means for expression? Why not do it yourself? Technology has progressed to the point where anyone can easily and inexpensively present their art to the masses without requiring the assistance of others. This is true of just about any art form, be it musical, visual, or written. To illustrate this, I'll give you some examples from my own life.

I played in an Alternative Rock band in college. Using two keyboards, a tone module, MIDI (Musical Instrument Digital Interface), and some basic piano skills, I was able to easily play two different keyboard parts at the same time. This was something I had to learn to do since it was a cover band and I was the only keyboard player. If we were covering a song that had more than one simultaneous keyboard part, I had to figure out a way to play those parts at the same time by myself. Synthesizers that could layer and split multiple sounds across the keyboard were still too expensive, so I had to use less expensive keyboards and a separate tone module to recreate all the sounds I needed at my fingertips simultaneously. The total cost of my college system was somewhere around $5000 for two keyboards, a tone module, a digital effects unit, keyboard mixer, and keyboard amplifier. That was still a relatively small investment when you consider that I was taking the place of two or three keyboard players for our band.

I also started getting into recording music while I was in college and during the five years I spent in the Navy after college. I started building my own portable home recording studio that I took along wherever the Navy decided I would go. It started out with my college band setup plus a 4-track cassette recorder and Radio Shack microphone, and has expanded during the last seven years to over $40,000 worth of MIDI and recording equipment. Today I can compose and record music with my system (in an apartment bedroom) that rivals the sound quality of many smaller professional studios. My investment has been significantly less than what many of these studios have invested in equipment and space, yet the sound quality is almost as good, if not better. The best part is that I can do it myself! I have no need to pay the high hourly fees to a professional studio, and I can even make money from my setup doing small demo projects for others who can't afford the bigger studios.

While in the Navy I still had the urge to perform, but putting together and playing in a traditional band was not feasible with my schedule — so I did it myself! With two keyboards, three tone modules, a drum machine, guitar, multiple digital effects devices, a MIDI sequencer, and a small sound system, I had everything I needed to accurately reproduce the music for just about any song. The only thing I lacked was a good singing voice — so I hired a female vocalist, and my first duo act was born. I later moved and formed another duo act with a new singer. Playing in a duo act was much easier than playing in a full size band, and the money was much better (since there were only two people to split the check between)! It was easier finding jobs for a duo act than a full size band, and the situations we played in were much nicer. It was also great not having to worry about the headaches of finding four other people who could get along and whose schedules worked well together.

As I prepared to transition into civilian life, I decided I wanted to make a career out of music and from using what I know to help other artists. With an Electrical/Computer Engineering degree, Navy management and leadership experience, more than 20 years of musical experience, and over seven years of experience with MIDI and electronic music equipment, I didn't have too much trouble coming up with ideas. I decided to take the plunge into self-employment (better known as unemployment), and MusicTECH was born. I went right to work on trying to find a way to put together my own professional, low cost, yet high-tech, recording studio. However, I knew this would be a long and difficult task to accomplish, so I quickly thought of other ways to help others while potentially providing an income for me to live on. I came up with several good ideas, two of which I am currently working very hard on.

One of the ideas I came up with (and that fits nicely into the subject of this article) was to write a book that would take singers and solo artists through the process of creating their own background music system for live performance. Recent developments in MIDI technology, specifically General MIDI, allow ***anyone*** to put together

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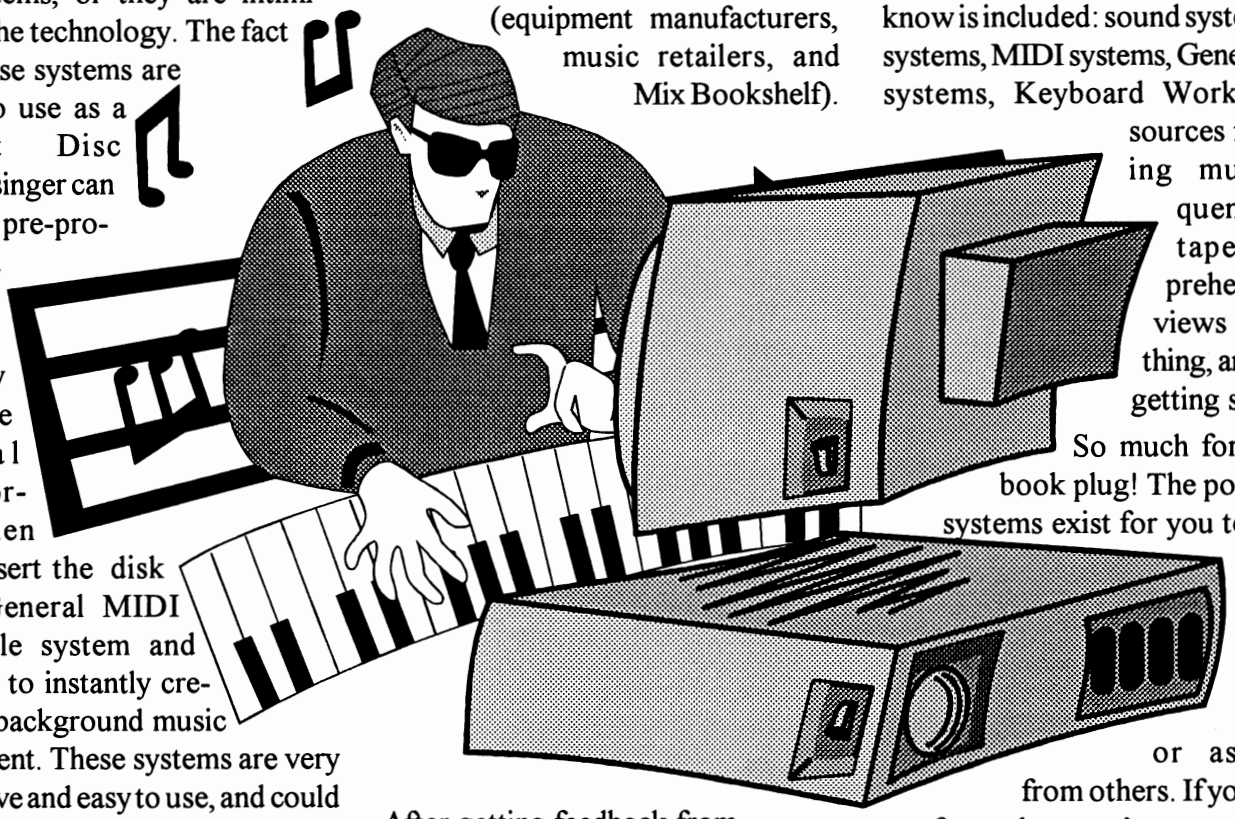
a background music system that is inexpensive and easy to use. It almost makes me jealous to think that someone today can replace my keyboards, tone modules, drum machine, and MIDI sequencer, with one compact unit that costs less than $1000 and sounds just as good! Yet, most singers and solo artists are not aware of these systems, or they are intimidated by the technology. The fact is that these systems are as easy to use as a Compact Disc player. A singer can purchase pre-programmed MIDI sequences of any song in the General MIDI format, then simply insert the disk into a General MIDI compatible system and push play to instantly create a full background music arrangement. These systems are very inexpensive and easy to use, and could easily put many of the keyboard and MIDI experts (like myself) out of work if more people knew about them. However, since I have bigger goals in life than to perform in a duo act, I decided to let the secret out and write a book about it. There are many books available that cover the individual topics of MIDI equipment, Sound Systems, or Tape machines, but I decided to put together a book that covers ***everything*** a singer or solo artists needs to know to put together, understand, and operate a complete MIDI or Tape based backing system.



This is how my book, *The Automated Backing Band*, was born, and is another example of "doing it yourself." I own a computer, word processing software, and a laser printer, so I decided to write and publish the book myself. After months of research and writing, I finally completed the rough draft of the book. It was 150 pages long and generated much interest among the people I sent it out to (equipment manufacturers, music retailers, and Mix Bookshelf).

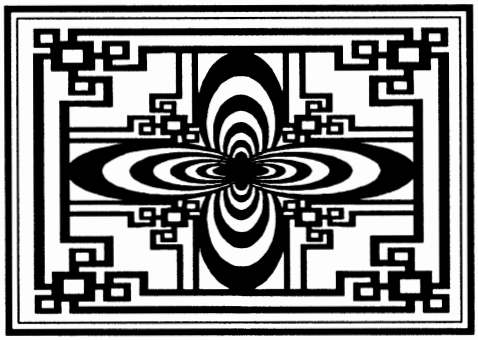
After getting feedback from these sources, I set about the arduous task of editing and revising the book, including using the computer to create illustrations and diagrams for the book. I also needed to research and write about many newer products that were introduced since I started the book (technology moves quickly). I am about half-way through the editing of the "final edition," and am still receiving MIDI sequences to review, plus digitized pictures of products from manufacturers to include in the book. The final edition will be over 200 pages long, and will be available in early 1994 through local music retailers and Mix Bookshelf. I don't plan on the book making much money, but the overall investment that I have made in it was relatively small (mostly just time), and it is a great way to get started in technical writing. This book is the perfect "do it yourself" guide for anyone who wants to perform music for a living without joining a full size band. Everything you need to know is included: sound systems, tape systems, MIDI systems, General MIDI systems, Keyboard Workstations, sources for backing music sequences and tapes, comprehensive reviews of everything, and tips for getting started.

So much for my free book plug! The point is that systems exist for you to express yourself without much effort, money, or assistance from others. If you want to perform, but can't put together a decent band — *create your own band!* If your art happens to be of the written variety, but you can't connect with any big publishing companies — *publish it yourself!* If you think you have the creativity to be a graphic artist, but can't seem to reproduce your visions with a paintbrush — *try creating your images with a computer!* Technology provides many alternatives to the more conventional methods of artistic expression.

As a final example, I'd like to mention that I am now playing in Tony Baird's

Continued on page 6

band. Perhaps you saw us at the Synesthetics show. We are only four people, but we get a much bigger sound than four people could have obtained just a few years ago. I now only use one keyboard and a guitar for my parts. It's not that I'm playing fewer parts, it's simply that my newest keyboard replaces many different keyboards and effects processors that I use to require to get the same types of sounds. I am able to split and layer multiple instruments and sounds across as many zones of the keyboard as I want. If you saw the show, and watched closely enough, you could see me move between different areas of the keyboard to play different parts, or quickly push a button to change the entire keyboard setup. I can save multiple split/layer configurations for each song, and then recall them with the touch of a button. Mike Gillette plays the Simmons electronic drum kit, connected to a drum machine, to produce all the drum sounds. He can save multiple pad configurations that can be switched with the touch of a button to call up a completely different sounding drum kit. Tony and Maria Baird



handle the vocal parts while also covering additional keyboard parts on their own keyboards. We also use a few other technology tricks to give us a bigger and better sound, but I can't give away all of our secrets! You'll have to come hear us live to find out more.

The CyberArtist group is a great resource for finding out about new technologies and connecting with other people that may have the knowledge you are looking for. If you need help with understanding MIDI, keyboards, computers, and music production, I am just one of the many people who can help you. The CyberArtist group also has many members that are on the cutting edge of other technologies, such as computer graphics, lighting systems, virtual reality systems, interactive music and art systems, and much more. The technology exists for you to "do it yourself," but you still need to find out about the systems. Learning the technology is always much faster and easier with someone else showing you how. The CyberArtist group is an invaluable resource for any "do-it-yourselfer."

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