

November 10, 1986

[1986]

Professor John Chowning
CCRMA, Department of Music
Stanford University,
Stanford, CA 94305
U.S.A.

Dear John:

It was nice to have a chat with you last time.
However, I worry that that single chat might lead to a very serious
consequence over the issue of FM patent licensing.

Please understand I am writing this letter personally to you as a friend,
and no politics involved.

In the morning of the 7th, I showed you an article of BYTE magazine that
carries a reference to FM on the AMIGA machine as a public information.
My intention was to let you know there was a guy who cited your name
on the article, and to suggest some enforcement measure be required to
keep exclusive license on FM between Stanford and Yamaha.

But it came to me as a kind of shock when I was informed that Stanford
was going to make basic licensing agreement to the open-issue again.

I think of no better alternative than keeping exclusive license between
Stanford and Yamaha, when various factors are considered.
I know you are fully aware of these factors but let me iterate it;

1. In observing New England Digital, how many units they sold over 8
years?

In musical and any kind of sound related industry, it is a strong fact that
Yamaha is only company that can sell number of units that justifies an
income statement of royalty with a magnitude currently being executed.

2. It is also a fact that people are getting used to PCM sound, and fm may
be weakening its foothold in certain area of sound generation; particularly
in percussive, and other effect sounds.

I don't think this is due to the argument of which is better in quality or
not.

Most computers, including AMIGA, are using PCM as a primary sound
generation technique, because majority of sound audience is interested
in hearing dog's bark, cat's meow, etc.

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FM can not produce those sounds in one to one mapping, or fm can be too expensive to produce those sounds.

We have to realize that voicing is a very expensive factor inherently required by FM, and only Yamaha with her expertise could voice the technology cost effectively.

Thus the value of FM or PCM should be discussed in relation to voicing cost, design cost, material cost (memory vs. random logic), and most importantly the field of application.

So when application is different, if we enforce PCM guy with a little bit of FM, how are we sure that he will not simply pull out from FM rather than paying royalty ?

3. If the FM is to be enhanced, or to be blended with those new comer technologies, who can accomplish it with strong motives?

I think YAMAHA can do it if she is secured with exclusive license.

4. If fm is to be implemented by others without additional improvement patents owned by Yamaha, who will and how soon come out with comparable sounds to compete with PCM and other new coming technique?

I think again the royalty economics only becomes meaningful when strong implementation of the technology, supported by a devotion of licensee is available in no or little wait to harvest.

Please understand my statements above are not intended to be against FM. But because I sincerely think that we have to objectively observe the relative position of FM to the changing new comers, and then plan for the future of FM technology, which is absolutely dependent upon mutual benefit, motivation, and dedication by Stanford and Yamaha.

How to enforce the exclusivity is just another matter which should be executed with established mechanism as far as licensing continues. LSI issue is also another matter that can be separately discussed.

But as a person who brought up BYTE article, I feel responsible to write this personal letter to you, and most strongly hope that basic agreement be completed as is and as soon as possible.

Sincerely,



Hiro Kato