

TECHNICON INTERNAL MEMO

From: H. Mark
To: Distribution
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Subject: Comments on Gabor's and Don's trip reports from Chambersburg meeting

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I agree very strongly with both Gabor's and Don's conclusions concerning the need for new software. While we have been saying this for some time, it bears repetition because currently there is at least as much interest in software as in hardware. People are as interested in a new program as in a new gadget, and, perhaps, more ready to buy it since they can justify it on the basis of already having the hardware to run it on. Also, they like the idea of having a new software "toy" to play with. This was even expressed at the second NIRA meeting, two years ago (see the trip reports from then). All this is in addition to the real benefits that some of these programs can confer (see, for example, my manuscript on Principal Components). Gabor's comment about instruments getting fancier are very much to the point, but besides color monitors and fiber optics, most of the fanciness is in the software.

Also, we need to take warning: as Don pointed out, a good number of the speakers used Pacific's equipment; far more than proportional to our estimates of market share. Thus it seems that, while we are being conservative in offering new software for fear of "confusing" our current customers, they are looking forward to the future market and getting acceptance in the scientific community which is clearly a good part of the future market.

In this regard I can confirm Gabor's guess: Peter Griffiths told me and J.W. that he got his Pacific unit free.

Also, there are some minor errors in the reports which should be corrected:

1. The newsletter of the "Council for Near-Infrared Spectroscopy" will accept short notes even though not full papers. (Without any papers it makes you wonder what they would have to publish. Indeed, we must wonder if the organization is at all viable. Don, as a member of the board of governors, do you

know, or can you find out how many people joined up? At the meeting in the cafeteria, even with all the announcements made at the morning session only 18 people showed enough interest to attend that meeting and that figure includes Ed and his Good Ole Boys).

2. Peter Griffiths is pushing Kubelka-Munk transform but I think I partially persuaded him that it is not the last word in reflectance theory. Also, some care must be taken when interpreting what he said. What Peter is doing is very different from what we are doing. Specifically, he is concerned with determining relative changes in concentration because he has no way of measuring the actual concentration of the molecular species in coal that are of interest to him. Therefore he must use a data transform that gives him a linear function of concentration over the part of the range he is interested in since he can use only one wavelength at a time. Peter also recognizes the advantages of the $\log(I/R)$ transform that we use, for the purposes to which we put the data.

3. I differ with Gabor in the interpretation of the "failure" of the Neotec unit at Masonite. The reason the instrument is not in use is NOT because they had some difficulty getting a calibration that was stable (even though they reported at great length on their difficulties and how they overcame them), but rather because the corporation wanted to do other things with the production line that were of more importance than getting measurements.