

M e m o r a n d u m**120.0023**

To: Mr. O. D. Millette
Oakland District Principal Auditor

December 20, 1988

From: John Abbott, Tax Counsel

Subject: B--- I--- – SR --- XX-XXXXXX
Computer assisted design (CAD) services – transfer of drawings on disks

This is in reply to your July 16, 1988 memo to Legal, in which you request our advice on the application of tax to B--- I---' computer assisted design (CAD) services. You write:

“The questionable area involved taxpayers manipulation of customer-furnished information and the specific question is does he develop original information which is exempt services or does he just convert data from one medium to another.

“Our audit recommendation is that his work is taxable. Mr. G--- M---, President of the firm, disagrees, contending that his services are exempt.”

You enclosed with your memorandum a letter from Mr. M--- to you dated June 29, 1988. Mr. M--- contends in his letter that his company's CAD services constitute the processing of customer-furnished information, which is a service exempt from tax under Regulation 1502(d), and the fact that the services normally result in the transfer of disks to his customers should not result in the tax being applied. Mr. M--- writes in his letter as follows:

“‘CAD Service’ as discussed in the audit, typically is comprised of the following activities:

“1) Client furnishes B--- I--- with paper drawings, blueprints, sketches, written descriptions, etc.

“2) B--- I--- takes client supplied ‘data’, and using micro-computer based CAD systems, manually edits, checks, and/or otherwise prepares composite drawings, detail drawings, and ‘layered drawings’ capable of further processing on customer owned equipment. Paper output from this process is incidental to the process and normally used only for verification of editing, etc.

“3) B--- I--- returns to the client a magnetically coded disk with graphic lines, arcs, entities, etc. now capable of being mathematically manipulated (electronically); i.e. the drawing now has ‘intelligence’. In most cases we also will have corrected mistakes in the original drawing, made entirely new drawings based upon our operators interpretation of numerous drawings supplied by the client, rearranged and redimensioned drawings, and rescaled drawings.

“The most important concept to understand, and the concept that underlies our contention that ‘new and/or original information is created in the CAD Service process is the concept of raster to vector conversion of graphic elements.

“In laymen’s terms, raster elements are elements depicted as a series of points; e.g. a line drawn on a piece of paper is basically a series of little dots (or pixels) connected together. Vector elements are elements described by equations or discrete geometric parameters; e.g. a circle can be described by (the Cartesian co-ordinates of) its center point and its radius. It is immediately obvious that a drawing described in vector terms (a CAD drawing) is fundamentally different, more ‘intelligent’, and basically ‘new’ in content as compared to the paper drawing which is presented in raster form.”

Mr. M--- also writes:

“The Board of Equalization must recognize that CAD Service as described above is fundamentally different from manual copying, photocopying, optical scanning, blueprint reproduction, etc. Even optical scanning produces a raster image that has little intelligence. Simply copying the drawing using any of the above techniques typically costs about 2% - 10% as much as CAD Service, e.g. our typical charge for vectorizing an “E-Size” drawing is between \$600 and \$800. We estimate that simply copying a drawing using the above techniques would cost from \$5.00 (Blueprinting) to less than \$75.00 (Photocopying).

“From a commercial standpoint we feel that the foregoing provides some common sense credence to our contention that CAD Service creates original information since it is unlikely that clients would pay us \$800 for merely reproducing their original drawings when, if their objective was simply to obtain copies, they could achieve the same result for between \$5.00 and \$75.00.”

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“We also feel that, at the less technical level implied by 1502-d-5-(B), our CAD Service typically involves sufficient operator discretion, editing, error correcting, development of original ‘composite items’ from multiple drawings, development

of detail items from complex drawings, etc. to distinguish CAD Service from the activities of merely reformatting, printing, data medium conversion, or preparation of graphic materials without creations of original information.”

Opinion

We agree with Mr. M---’ contention that the CAD Services performed by B--- I--- constitute nontaxable processing of customer-furnished information pursuant to Regulation 1502(d)(5)(A), and the disks on which B--- I--- transfers the information produced by the CAD services are incidental to those services. We regard the transactions described by Mr. M---’ letter as constituting more than simply the reformatting or conversion of data from one medium to another. When the customer supplies B--- I--- with drawings, blueprints, sketches, and written descriptions, and receives in return a disk produced by the use of CAD software, the information contained on that disk is expressed mathematically rather than graphically. This constitutes the type of service described in subdivision (d)(5)(A) because the taxpayer was required to make computations from the information supplied by the customer. Because the customer receives the information in the form of mathematical data, the customer can now manipulate that data through the use of its own computer programs. The service remains nontaxable even if B--- I--- supplies a pen plotted drawing together with the CAD data on the disk.

Please note, however, that when B--- I--- provides drafting services only, or provides pen plotted drawings only, charges for these transactions remain subject to tax. Both of these types of transactions constitute mere reformatting of data or converting data from one form to another, and are taxable under the rationale set out in Albers v. State Board of Equalization, 237 Cal.App.2d 494.

JA:sr