Assessment of Embedded Software

Introduction

In 1972, the Legislature enacted Revenue and Taxation Code[1] section 995 which essentially provides that all computer software except basic operational programs is exempt from property taxation. A basic operational program is defined in section 995.2 as a computer program that is "fundamental and necessary to the functioning of a computer." Property Tax Rule 152[2] clarifies that "basic operational programs" include, on a personal computer, the basic input output system, or BIOS,[3] but does not include operating systems such as Windows. It follows that the myriad other application programs that might be found on a personal computer are also not taxable.

The 1972 Legislature could not have imagined the progress of computer technology over the succeeding decades. Thus, today, computer software does not reside only in the stand-alone multi-purpose machines we use every day at home and in business. Increasingly, software is also *embedded* in all sorts of machinery and equipment. This latter form of software, which serves to control processes via computer chips that were once performed mechanically or manually, is called "embedded software."

As one familiar example, whereas automobiles once came with carburetor systems that mechanically controlled the fuel and air mixture burned by the engine, those mechanical systems have been replaced by computer-controlled fuel injection systems. Analogous computer-driven systems are pervasive in modern equipment of all kinds, including that used in medicine, airlines, manufacturing, shipping, food service, agriculture, and countless other industries.

Assessment Issues

Where a computer or other item of equipment is bundled together with application software for purchase at a single price, Rule 152 allows the county assessor, lacking evidence to the contrary, to simply value the taxable tangible property at its acquisition cost. Thus, the rule provides a de facto rebuttable presumption that the purchase price of equipment that includes embedded software is the value of that equipment for tax purposes.

Under the rule this presumption may be rebutted more or less easily depending on the facts. Specifically, if the taxpayer can "supply sale prices, costs or other information that will enable the assessor to make an informed judgment concerning the proper value to be ascribed to taxable and nontaxable components of the [purchase] contract,"[4] then the county assessor must exclude the value of the nontaxable software from the value of the equipment. Thus, the rule burdens the taxpayer with

[1] All statutory references are to the Revenue and Taxation Code unless otherwise specified.
[2] All references to Rules are Property Tax Rules from Title 18, Public Revenues, California Code of Regulations.
[3] Even BIOS software is exempt unless it is "bundled" with the computer at purchase; *Cardinal Health 301, Inc. v. County of Orange* (2008) 167 Cal.App.4th 219.
[4] Rule 152, subdivision (f).

the job of providing the county assessor with data to make an informed judgment about the value of any nontaxable software, but leaves to the county assessor (and, frequently, the assessment appeals board) the decision as to whether such information is sufficient to reliably value that software.

One issue involved in segregating the value of embedded software from the equipment whose functioning depends on it was resolved in the case of *Cardinal Health 301, Inc. v. County of Orange,*(2008) 167 Cal.App.4th 219. There the court found the county assessor wrong in assessing certain medical equipment at its total cost, including the cost of embedded software, solely on the grounds that the software was bundled into the sale or lease price of computer equipment. The court found that since Cardinal had provided the county assessor with data that would enable an informed judgment as to the value of the nontaxable software, the trial court's ruling (which upheld the assessment appeals board affirmation of the county assessor's position) must be reversed. The case was remanded for further proceedings on the issue of separately valuing the non-taxable software.[5]

The Problem of Valuation

The *Cardinal Health* decision clarified that mere bundling of otherwise nontaxable software is not dispositive of whether the value of that software is severable from the value of the equipment whose functioning depends on it. Still, the decision left unaddressed several issues that continue to impact the assessment of such equipment.

First, while taxpayers are theoretically in a better position than assessors to have knowledge of the value of nontaxable application software embedded in their own equipment, in practice taxpayers may not have the necessary information. The cost of the equipment *including* the software is what is relevant to the buyer or lessor; segregating the value into components is relevant only for tax purposes. Thus, while it is clear under *Cardinal Health* that taxpayers *may* provide the county assessor with information that would enable an informed judgment as to the value of nontaxable application software, as a practical matter most taxpayers will find doing so to be a decidedly uncertain problem. Therefore, those efforts will often have to be resolved by assessment appeals boards, who may be just as uncertain as taxpayers. And in cases involving such uncertainty, appeals boards may find it easier to settle on a middle ground, if only because of the uncertainty.

Second, while the *Cardinal* court resolved a narrow issue of interpretation concerning the 1972 statute and the clarifying Board rule, the court did not consider the unimaginable (in 1972) progress in computer technology over the past four decades. Specifically, the statute as enacted contemplated only stand-alone computers and associated software.

The Legislature in 1972 could not have envisioned that software would later be written specifically to enable the functioning of certain machinery and equipment; or that, conversely, certain machinery and equipment would later be designed specifically to accommodate developable software. Thus, a question remains about whether the language of those early statutes adequately addresses the inescapable entwinement between modern machinery and equipment and the software embedded within it.

[5] Upon remand, the county assessor and the taxpayer stipulated to a value and the appeal was settled.

Possible Solutions

In the current legislative session a bill was introduced that was designed to inject some clarity into the problem of valuing equipment with embedded software. AB 832, which was not enacted, would have required taxpayers to prove the value of any non-taxable application software under a very high legal standard—clear and convincing evidence.

The sponsors of the bill argued that this solution would have required taxpayers claiming an exemption for embedded software to provide evidence so strong that appeals would be minimized, and the county assessor's task of assessing machinery and equipment using mass appraisal procedures could proceed with minimal disruption. If the bill had progressed through the legislative process, taxpayers might have argued that such a solution would benefit only county assessors, and that taxpayers would be held to an impossible standard in order to receive the exemption.

Another possible solution would be to amend the sections that originated in 1972 to provide that otherwise nontaxable embedded software is, for assessment purposes, inseparable from the taxable *equipment* whose functioning depends on it.

Such a solution would simplify the county assessor's job even more than would providing for a higher evidentiary standard (as in the case of AB 832). It would, however, leave taxpayers altogether without the exemption that, under existing law as interpreted by *Cardinal Health*, is now available to them.

A third solution that has been suggested is to have the rule or the statute assign to the nontaxable software a certain percentage of the total value of the equipment. While such a solution might be practical in some ways, it has the disadvantage of being inherently arbitrary without a detailed cost study of each piece of equipment within which software is embedded.