

# Assessment of Embedded Software

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## Introduction

In 1972 the Legislature enacted Revenue and Taxation Code<sup>1</sup> 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<sup>2</sup> clarifies that "basic operational programs" include, on a personal computer, the basic input output system, or BIOS,<sup>3</sup> 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 envisioned 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systems that mechanically controlled the fuel and air mixture burned by the engine, those mechanical systems have been replaced by computer-controlled fuel injection systems.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,"<sup>4</sup> 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

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<sup>1</sup> All statutory references are to the Revenue and Taxation Code unless otherwise specified.

<sup>2</sup> All references to Rules are Property Tax Rules from Title 18, Public Revenues, California Code of Regulations.

<sup>3</sup> 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.4<sup>th</sup> 219.

<sup>4</sup> 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.<sup>5</sup>

## 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.

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.

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<sup>5</sup> Upon remand, the county assessor and the taxpayer stipulated to a value and the appeal was settled.

## **Recent Efforts to Address Issue**

In the 2011 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.

Also in 2011, embedded software was a topic of discussion at the Board’s annual meeting with county assessors. At that meeting the Board directed staff to explore with interested parties possible means of segregating the value of embedded software from the equipment in which it resides.

In the first half of 2012 staff met on several occasions with both assessors and industry representatives. It was decided that a working group involving all parties, headed by Board staff, should be established. However, at the Board’s January 2013 meeting the establishment of a working group was placed on hold and staff was directed to gather information about the treatment of embedded software not only by assessors, but also by the Board’s State-Assessed Properties Division (SAPD). That effort, which is ongoing, involves (1) querying county assessors and SAPD about any adjustments made for embedded software, (2) asking for copies of documentation used to make such adjustments, and (3) requesting from assessors information about the number of assessment appeals that have involved embedded software, as well as copies of evidence presented by the applicants during such appeals.

**COMPILATION OF  
RESPONSES TO  
BUNDLED NONTAXABLE  
SOFTWARE  
QUESTIONNAIRE**

**~Embedded Software~**

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**Compiled by  
State Board of Equalization  
Property and Special Taxes Department  
County-Assessed Properties Division**

## Preface

In 2011, *embedded software* was a topic of discussion at the State Board of Equalization's (Board) annual meeting with California County Assessors. At that meeting, the Board directed staff to explore with interested parties possible means of segregating the value of application software from the equipment in which it resides.

Subsequently, at the Board's January 2013 meeting, staff was further directed to gather information about the treatment of embedded software not only by assessors, but also by the Board's State-Assessed Properties Division (SAPD). Those efforts involved:

1. Querying assessors and SAPD about any adjustments made for embedded software;
2. Asking for copies of documentation used to make such adjustments; and
3. Requesting from assessors information about the number of assessment appeals filed that involved embedded software, as well as copies of evidence presented by the applicants during such appeals.

In April 2013, the Board disseminated a questionnaire to all California county assessors regarding the assessment of bundled nontaxable software in their respective counties. The questions were designed to elicit information as to whether there were problems statewide on the assessment of application software, and, if so, whether the problems were confined to any particular industry(ies).

The following are the questions contained in the April 2013 questionnaire and the responses to the questions provided by 48 of the 58 county assessors.

## Compilation of Responses to Questionnaire

1. Have adjustments been made to remove bundled nontaxable software from the cost of machinery and equipment in your county?

Yes. If you, please provide responses to questions 2 through 9.

**20 Counties**

No. If no, please provide responses to questions 8 and 9.

**28 Counties**

2. How did you become aware that an adjustment was necessary?

Taxpayer Notified the Assessor before Business Property Statement was filed

**2 Counties**

Business Property Statement

**6 Counties**

Property Tax Audit

**12 Counties**

Assessment Appeal Filed

**14 Counties**

Other (Please Explain)

**Comment: Audit was "sold" to another county who supplied information provided by the agent.**

**Comment: Agents bring up issue; hard to separate the value reduction to software only when agent is requesting reduction.**

3. What type of documentation was used to support the adjustment (mark all that apply)?

Study conducted or data collected by your office.

**3 Counties**

Study or data provided by a taxpayer.

**6 Counties**

Invoice

**9 Counties**

Manufacturer or vendor provided a breakdown in costs concerning one or more of the following: hardware, basic operational software, operational software, and/or application software.

**9 Counties**

Other (Please Explain)

**Comment: Accepted data received by another county from the agent.**

**Comment: Industry study for Set Top Boxes**

**Comment: Letters from vendors were rejected by assessor but accepted by AAB**

**Comment: Questionable cost breakdown provided**

**Comment: Vendor provided a % of software to hardware letter**

**Comment: Spreadsheet summary of company quote**

**Comment: Stipulation by taxpayer; assessor conducted field inspection**

**Comment: Received volumes of cost data but it did not support adjustments**

**Comment: Consulted with other counties**

4. How was the adjustment calculated (mark all that apply)?

Percentage of the total cost of the equipment? If this adjustment was used, please describe the equipment and identify the percentage used.

**Comment: taxpayer asked for 45% to 50%; taxpayer accepted county offered 10%**

**Comment: MRI machine - 30%**

**Comment: 15%-30% for medical equipment, plus warranty and training costs of 5%**

**Comment: 20% estimate full cash value reduction was agreed and included 16% nonassessable software, 4% estimate warranty and training costs**

**Comment: Up to 30% adjustment**

**Comment: High-tech medical including MRI units – 35%**

Cost on invoice?

**6 Counties**

Cost based on breakdown provided by manufacturer or vendor?

**6 Counties**

Other (Please Describe)

**Comment: Tax agent prepared worksheet for adjustments**

**Comment: MRI machine 30% rejected by assessor but accepted by AAB**

**Comment: Cost/breakdown provided by manufacturer; average % applied**

**Comment: Internet information provided by taxpayer**

**Comment: Tried to verify amount through manufacturer; applied reduced trade level to account for software**

**Comment: Estimated %; 20% to 30% depending on make, model, and year**

**Comment: Negotiated settlement; unable to separate % adjustment for bundled software versus trade level**

5. Please complete the following table with respect to the number of assessment appeals filed in your county due to bundled nontaxable software.

<b>Year</b>	<b>2012-13</b>	<b>2011-12</b>	<b>2010-11</b>	<b>2009-10</b>	<b>2008-09</b>	<b>2007-08</b>
Appeals Filed	3	2	20	20	1	1
	8	27	1	1	20	4
	33	20	1	32	1	3
	5	1	121	9	54	1
	73	76	21	22+	1	13
	20+	14	42+	2	13	2
	6	1	11	7	20+	8
	110	20+	4	2	10	3
	1	8	5	1	3	1
	5	15	1	1	1	1
	5	7	1	8	1	9
	1	1	8		5	7
	1	1			11	
	8	9				
	6	6				
	<b>285</b>	<b>192</b>	<b>236</b>	<b>105</b>	<b>141</b>	<b>53</b>

**OUTCOME/STATUS OF APPEALS**

Year	2012-13	2011-12	2010-11	2009-10	2008-09	2007-08
Pending/Unresolved	3 8 33 5 73 20+ 6 110 1 5 5 1 8 6	2 25 22 14 1 20+ 8 15 7 6	16 21 11 2 5	9 2 5 2	1 10 3	1 7 3
	<b>284</b>	<b>120</b>	<b>55</b>	<b>18</b>	<b>14</b>	<b>11</b>
Withdrawn	* 1	2 1 16 1	1 15 7 5	8 5	7	3 2
	<b>1</b>	<b>20</b>	<b>28</b>	<b>13</b>	<b>7</b>	<b>5</b>
* No show						
Stipulated		20 38 1	20 1 85 2 1	20 1 12 2 2 1	1 20 1 54 13 1	1 13 1
		<b>59</b>	<b>109</b>	<b>38</b>	<b>90</b>	<b>15</b>
Hearings Before the Appeals Board		9	4 31 8	12 14 2 8	14 5 11	1 9 7
		<b>9</b>	<b>43</b>	<b>28</b>	<b>30</b>	<b>17</b>

**OUTCOME OF HEARINGS BEFORE THE APPEALS BOARD**

Year	2012-13	2011-12	2010-11	2009-10	2008-09	2007-08
Assessments Reduced	1	1	4 30 1	12 13 1	1 13 1	1 4 13 1
	1	1	35	26	15	19
Assessments Upheld		9	1 8	8	5	9
		9	9	8	5	9
Assessments Increased			3 1	14	14	1
			4	14	14	1

6. Use the following table to identify the type of industry where adjustments were made to remove bundled nontaxable software (BNTS) from the cost of machinery and equipment. If available, include adjustment information, year of adjustment, and source used to identify the necessary adjustment.

No	Industry	Total Assessed Value	Adjustment to Remove BNTS	Net Assessed Value	Year <sub>1</sub>	Source <sub>2</sub>
1	Medical	\$3.4 million	<50K		A	2
2	Leased Heath Care	\$557,370	Table Provided	\$198,152	E	4
3	Leased Heath Care	\$339,340	Table Provided	\$120,666	F	4
4	MRI		\$166,192		A	1
5	MRI		\$213,676		B	1
6	MRI		\$206,520		C	3
7	MRI		\$247,087		D	3
8	MRI		\$510,993		E	3
9	MRI		\$955,911		F	5
10	Small Adjmts to PCs					
11	Medical/Hospital				A	
12	Medical/Hospital	\$8,600,334	\$2,688,091	\$5,912,243	B	4
13	Medical/Hospital	\$47,139,538	\$14,126,516	\$33,013,022	C	3,4,5
14	Medical/Hospital	\$46,540,370	\$13,699,072	\$32,841,298	D	3,4,5,6
15	Medical/Hospital	\$29,127,780	\$9,971,290	\$19,156,490	E	4,5,6
16	Medical/Hospital	\$23,541,947	\$8,213,630	\$15,328,317	F	4
17	Medical/Hospital	\$4,186,139	\$1,106,984	\$3,079,155	G	4
18	Medical					
19	Medical Equipment	\$3,376,709	\$885,125	\$2,491,584	E	4
20	Medical Equipment	\$18,497,551	\$6,121,706	\$12,375,845	F	4
21	Medical (MRI/CT)		20% – 30%		B/C	4,1

No	Industry	Total Assessed Value	Adjustment to Remove BNTS	Net Assessed Value	Year <sub>1</sub>	Source <sub>2</sub>
22	Medical (dialysis)	\$2.3 million estimate	30%		E	5,1
23	Medical (dialysis)	\$1.7 million estimate	20%		D	5,1
24	Medical (dialysis)		0%		C	5,1
25	Medical	\$942,858	\$188,572	\$754,286	B	3
26	High Tech Medical	\$185,000	\$47,000	\$138,000	C	2
27	Medical-Cardinal					
28	Dialysis	\$2,110,189			H	
29	Dialysis	\$2,202,910			G	
30	Dialysis	\$2,211,102			F	
31	Dialysis	\$3,488,190			E	
32	Dialysis	\$2,658,992			D	
33	Dialysis	\$7,181,474			C	
34	Dialysis	\$6,378,544			B	
35	Dialysis	\$3,764,160			A	
36	Theater Proj Equip	\$197,552	\$36,520	\$161,032	A	1
37	Healthcare		Net-value excl	\$2,190,806	A	1
38	Healthcare		\$2,073,376	\$2,273,220	B	1
39	Healthcare		\$1,453,253	\$3,095,289	C	1
40	Healthcare		\$1,202,004	\$3,003,969	D	2
41	Healthcare		\$1,141,689	\$2,940,040	E	2
42	Healthcare		\$1,231,474	\$1,682,201	F	2
43	Medical/Healthcare	\$1,231,538	\$566,535	\$665,003	F	4
44	Medical/Healthcare	\$1,451,340	\$739,444	\$711,896	E	4
45	Medical/Healthcare	\$3,798,468	\$1,003,033	\$2,795,435	A	2
46	Medical/Healthcare	\$4,671,892	\$1,220,252	\$3,451,640	B	2
47	Medical/Healthcare	\$5,308,480	\$1,358,869	\$3,949,611	C	2
48	Medical/Healthcare	\$6,095,013	\$1,534,297	\$4,560,716	D	2

<sup>1</sup> Use the following codes to identify the roll year: **A** for 2012-2013; **B** for 2011-2012; **C** for 2010-2011; **D** for 2009-2010; **E** for 2008-09; and **F** for 2007-08.

<sup>2</sup> Use the following codes to identify the source: **1** for Business Property Statement; **2** for Property Tax Audit; **3** for Assessment Appeals Withdrawn; **4** for Assessment Appeals Stipulated; **5** for Assessment Appeals Hearings with Board Reduced Values; and **6** for all Other (if "other," please complete the following table).

**Source: Other**

No.	Description of "Other" Source
12	BPP resulting from prior year appeal – prior to audit
14	BPP resulting from prior year appeal – prior to audit
21	The value and adjustment estimated; software not isolated issue just a part of appeal. AAB did not separate value as to issues such as software.

7. Please indicate the number of cases concerning appeals of assessments in which the valuation of bundled nontaxable software, embedded software, Revenue and Taxation Code sections 995 or 995.2, or Property Tax Rule 152 have been an issue since January 1, 2007.

No appeals have been filed with the appeals board.

**5 Counties**

Number of decisions that have been reached by the appeals board.

**5 Counties – 56 decisions**

Number of taxpayers who have filed for a refund. Please provide copies of each filing. For each appeal, please provide the evidence presented by the taxpayer and assessor.

**5 Counties – 9 refund filings**

Number of settlements that have been reached after the filing of a claim for refund.

**6 Counties – 61 settlements**

Number of cases that have been filed by the county or taxpayers in Superior Court challenging the valuation decision by an appeals board. Please provide copies of the complaint, answer, and evidence presented by the taxpayer and/or assessor and any decision by the Superior Court.

**1 County – 1 filing**

Number of appeals of any decision of the Superior Court. Please provide copies of all documents filed with the court of appeal.

**1 County – 1 court decision**

Other (Please Explain

**Comment: 47 appeals by same taxpayer. AAB ruled insufficient evidence presented by taxpayer**

**Comment: 35 appeals but not enough evidence provided**

**Comment: 2 appeals filed, but both withdrawn**

**Comment: number of cases stipulated or settled before going to AAB: 2009=5, 2010=14, 2011=13, 2012=0**

**Comment: 51 appeals filed; none have been heard, stipulated, or resolved**

**Comment: 5 appeals filed; postponed awaiting actions across the state**

**Comment: 27 appeals filed since 2007; none have been heard yet.**

8. When conducting audits, have you found that taxpayers reported less than full cost of equipment due to bundled nontaxable software?

No

**33 Counties**

Yes

**12 Counties**

If yes, how many instances were discovered in the last four years?

**8 Counties – 21 discoveries**

If yes, did they have evidence to substantiate their adjustment?  Yes  No

No

**5 Counties**

Yes

**3 Counties**

9. Have you received information/evidence from taxpayers requesting that bundled nontaxable software be excluded from an assessment that you did not accept?

No

**23 Counties**

Yes

**22 Counties**

If yes, please identify the taxpayer's documentation submitted as support for an adjustment and provide us with a copy of the information.

Study or data provided by a taxpayer.

**6 Counties**

Invoice

**2 Counties**

Manufacturer or vendor provided a breakdown in costs concerning one or more of the following: hardware, basic operational software, and application software, and/or application software.

**3 Counties**

Other (Please Explain)

**Comment: Letters, memos, emails from agent with models of medical equipment**

**Comment: One 1997 appeal; appeal ultimately dropped**

**Comment: Letters from vendors; undocumented opinions of tax agents**

**Comment: General opinion of taxpayer**

**Comment: Letters/invoices from taxpayer with breakdown by % for make/model**

**Comment: Quotes from vendor**

**Comment: % with no supporting evidence**

**Comment: Documentation prepared by agent with no verification**

**Comment: Memos and emails from agent claiming a % of software**

**Comment: Letters from vendors; taxpayer spreadsheets with no support**

**Comment: Memos and letters from manufacturer with no support to back up estimate**

**Comment: Memo from manufacturer stating 30% of cost is software**

**Comment: Requests for deductions made on BPS and in appeal filings**

**Comment: Not accepted any claim for software because companies have not met Rule 152(f) requirements to supply acceptable information**

**Comment: Letter/email estimating % of software**