Income Tax Treatment of Computer Software

A Policy Statement from the Commissioner of Inland Revenue

Introduction

This policy statement sets out the Commissioner of Inland Revenue's views on the income tax treatment of computer software. It applies to expenditure incurred on or after 1 July 1993. Software expenditure incurred before 1 July 1993 was fully deductible as an expense for tax purposes; this policy does not alter that treatment.

The policy is based on Inland Revenue's view of the law, including the new depreciation regime introduced by the Income Tax Amendment Act 1993. The policy is also consistent with generally accepted accounting principles.

Where this policy statement does not cover a taxpayer's particular circumstances, Inland Revenue is willing to discuss the matter. We are also happy to help if any taxpayer has difficulties with interpreting this statement. Direct your inquiries to:

> The Manager (Rulings)
> Inland Revenue Department
> Head Office
> PO Box 2198
> WELLINGTON

Taxpayers who disagree with an assessment based on this policy have statutory objection rights. Inland Revenue's "Objection Procedures" book (IR 266) explains how to make an objection.

This policy statement may be amended from time to time in the light of any relevant court decisions.

Summary of tax treatment of computer software

Software purchases

- Cost of purchase to be capitalised and depreciated at 40% diminishing value or 30% straight line
- Immediate write-off available for software costing less than $200
- Cost of maintenance may be deducted
- Cost of upgrades must be capitalised and depreciated at 40% diminishing value or 30% straight line

Specified lease of software

- Cost price of software to be capitalised and depreciated at 40% diminishing value or 30% straight line
- Interest component of lease payments may be deducted
- Maintenance costs may be deducted
- Cost of upgrades must be capitalised and depreciated at 40% diminishing value or 30% straight line

Software developed in-house for use in business

- Pre-development expenses may be deducted
- Development expenses must be capitalised until project completed and then depreciated at 40% diminishing value or 30% straight line
- Costs of unsuccessful development may be deducted
- Maintenance costs may be deducted
- Cost of upgrades must be capitalised and depreciated at 40% diminishing value or 30% straight line

Commissioned software

- Development costs must be capitalised until project accepted, then depreciated at 40% diminishing value or 30% straight line
- Costs of unsuccessful development may be deducted
- Maintenance costs may be deducted
- Cost of upgrades must be capitalised and depreciated at 40% diminishing value or 30% straight line

Software leased other than under a specified lease

- Lease payments are deductible over the term of the lease

Software developed for sale or licence

- Development costs deductible in year incurred
- Value of unbilled work in progress and unsold completed software must be taken into account as trading stock. The value of trading stock at balance date must be included as income in the taxpayer's return.

Detailed policy

This statement sets out the detailed policy on the tax treatment of expenditure incurred on computer software on or after 1 July 1993. For the purposes of this policy "software" includes all programmes or routines used to cause a computer to perform a desired task or set of tasks, and the documentation and training materials required to describe and maintain those programmes.

The policy provides details of the tax treatment for taxpayers who:

(a) Purchase software;

(b) Lease software under specified leases;

(c) Develop software in-house for use in their business;

(d) Commission software development;

(e) Lease software other than under specified leases;

(f) Develop software for sale or licence.

This statement is divided into three sections. Section 1 concerns taxpayers who have to capitalise and depreciate the cost of software (categories (a), (b), (c) and (d) above). Section 2 concerns taxpayers who may deduct the cost of software and do not have to capitalise and depreciate those costs (category (e) above). Section 3 concerns taxpayers in the business of developing software for sale or licence who are subject to the trading stock regime (category (f) above).

Section 1

Taxpayers Who Acquire, Commission, or Develop Software for Their Own Use

The depreciation for software is set at 40% diminishing value or 30% straight line, depending on the method the taxpayer adopts.

This section describes the four categories of taxpayers required to depreciate the cost of software and deals with specific issues related to each. It then deals with a number of general issues (e.g., special depreciation rates), which apply equally to all four categories.

Software purchases

A taxpayer who acquires software for use in a business gets an enduring benefit. This will be the case whether the taxpayer acquires all or only some rights in the software. The expenditure incurred is capital in nature and non-deductible, but the taxpayer can claim depreciation on the software over its life.

Example 1: Purchase and Depreciation

LMN Ltd purchases a software package for $300 in the 1994-95 income year. The company's balance date is 31 March. The depreciation treatment is as follows:

Year		Diminishing Value (40%)	Straight Line (30%)
1	Cost	300	300
	less dep'n	120	90
	balance	180	210
2	opening value	180	210
	less dep'n	72	90
	balance	108	120
3	opening value	108	120
	less dep'n	43	90
	balance	65	30
4	opening value	65	30
	less dep'n	26	30 (balance)
	balance	39	0

Specified leases of software

A specified lease is defined in section 222A of the Income Tax Act ("the Act"). Generally, this definition includes a lease with a guaranteed residual value, or (where certain other criteria are met) a lease with a term of more than 3 years.

Where a taxpayer acquires software under a specified lease its treatment will be covered by sections 222A to 222D of the Act. The taxpayer is deemed to purchase the software and must capitalise the cost price and depreciate it. The difference between the total lease payments and the cost price of the software is deemed to be interest for tax purposes. The taxpayer can deduct this "interest" over the term of the lease.

See section 2 of this statement for the treatment of software leased other than under a specified lease.

In-house software development

An in-house software developer is a taxpayer who develops software for use in their own business. Developing software in-house creates a capital asset (i.e., an asset which gives an enduring benefit to the business).

The tax treatment of expenditure incurred on the software development is linked to the different phases of the process. The three phases are:

(a) The pre-development phase - usually including reviewing and analysing the project's feasibility;

(b) The development phase;

(c) The post-development phase - occuring after the project has been accepted and including things such as implementing and maintaining the software.

The following table shows how to treat the expenditure incurred in each of these phases:

Pre-development phase	
Feasability study of the project as part of on-going business	Revenue

Development phase	
Gathering and analysis of user requirements	
Systems design	
Detailed software specification	
Programme construction	
Software testing	
User or customer testing (acceptance testing)	Capital
Development of manual and training materials	
Preparation of documents to describe, support, and for on-going maintenance of software product	
Management review throughout the development phase (e.g., quality assurance)	

Post-development phase	
Implementation costs:	
Instruction and training of staff	Revenue
Implementation of software (after software functionally complete)	
Maintenance	
Help desk facilities	
Fixing programme bugs	
Bringing performance up to specification	Revenue
Making minor changes such as increasing field sizes	
Upgrades	
Product enhanced by new functions and features to increase capacity or performance	
Trade-in of software for new version with more capacity or increased performance	Capital

Expenditure incurred during the pre-development and post-development phases (excluding expenditure on upgrades) is deductible.

Expenditure incurred during the development phase must be capitalised to a software development account until the development is either completed or abandoned. This expenditure includes both direct and indirect costs.

The major direct costs in developing software are the personnel and machine time involved.

• Personnel cost can be determined by using a system which records against a project the direct hours that each staff member spends on that project.

• The cost of machine time can be calculated on the system hours allocated to the project.

These costs would generally be included as direct costs, but there may also be other direct costs to include, such as depreciation on computer hardware dedicated to the project.

Indirect costs include all the overhead costs associated with the taxpayer's software development process which cannot be directly linked to a particular project. These may include:

(a) The costs of running the software operation; for example rates, rent, insurance, energy costs (heat, light, and power):

(b) Indirect labour costs; clerical and management costs that can't be directly attributed to the project:

(c) Indirect material costs; computer paper, floppy disks, printer toner.

The most appropriate method for allocating indirect costs will be based on direct person hours allocated to each project. However, a taxpayer can use another method if s/he can show that it is appropriate.

Example 2: Allocation of indirect costs for in-house developer

XYZ Bank Ltd has an in-house operation which develops software for use in the bank's business. In the last income year the software development operation worked on one major project and spent the rest of the time on maintenance work for existing software.

The in-house operation employs two staff for software development and maintenance work. Each staff member works 1,000 hours a year.

	Project Development work (hours)	Maintenance work (hours)	Total
Jack	800	200	1,000
Jill	600	400	1,000
Total	1,400	600	2,000

Overhead costs allocated to software development operation for income year: $100,000

Allocation of overhead to project:

Total hours worked	=	2,000 hours
Proportion of hours worked for project	=	$\frac{1,400}{2,000}$
	=	0.7
Overhead costs of project	=	$100,000 x 0.7
	=	$70,000

Therefore, besides the direct costs of the project, XYZ Bank Ltd must capitalise an additional $70,000 of overhead cost for the project.

When the development is completed capitalised costs will be deductible under the depreciation regime.

Commissioning a software development

A taxpayer who commissions a software development receives an enduring benefit when it is completed. Therefore, all the taxpayer's development costs relate to producing a capital asset. The taxpayer must capitalise all expenditure until the software is fully developed (i.e., when the final form of the package is accepted). These costs can then be depreciated over the life of the asset.

Example 3: Successful development

In Year 1, ABC Ltd contracts Software Development Ltd to develop a software programme. The contract requires payment of $10,000 for the pre-development work and $90,000 for the development work. In Year 1, ABC Ltd makes the first payment of $10,000 for pre-development work. ABC Ltd deducts that cost for tax purposes. In Year 2, the software programme is completed and ABC Ltd makes the second payment of $90,000. ABC Ltd must capitalise and depreciate that cost, as the development is completed.

Unsuccessful developments

The cost of an unsuccessful software development can be deducted if the software can no longer be used and the project is stopped. This includes the case where the unsuccessful software development is never implemented. Section 108K of the Act requires the taxpayer to apply to the Commissioner for a determination that the software can no longer be used. Such applications should be sent to:

The Manager (Rulings)
Inland Revenue Department
P O Box 2198
WELLINGTON

Example 4: Unsuccessful development

In Year 1, Customer Ltd contracts with AB Software Consultants to design a computer programme to monitor and analyse production efficiency. Customer Ltd is to make three progress payments during the contract. At the end of Year 1 the first two payments have been made. One payment was for the pre-development phase and is treated as an expense for tax purposes. The other payment (which is for development work) is capitalised for tax purposes. During Year 2, Customer Ltd varies its requirements and AB is unable to complete the development. Accordingly the project is abandoned by mutual consent without the third payment being made. For tax purposes Customer Ltd may deduct in its return for Year 2 the amount of the payment capitalised in Year 1.

Subsequent sale

A taxpayer who has developed software for his/her own use (and capitalised and depreciated the development costs) may also subsequently sell a copy to a third party. For example, a manufacturing business may sell a copy of the stock control software used in its business to another manufacturing business. The proceeds of the sale will be assessable income.

In these circumstances the taxpayer must continue to depreciate the development costs. The deductible costs of sale will be the costs of producing the second copy of the software (for example, the costs of copying disks and printing manuals and training material).

Maintenance and upgrades

Payments made for the maintenance of software used for business purposes will be deductible, as the business does not gain an enduring benefit. Software maintenance ensures the software continues in its original intended state. Maintenance corrects errors or keeps the product updated with current information. It includes such things as adding data items to a thesaurus, software encyclopaedia, or database. Generally, maintenance activity includes routine changes which do not materially increase the capacity or performance of the software.

Inland Revenue would generally accept that payments for the following are deductible maintenance payments:

(a) help desk facilities;

(b) fixing programme bugs;

(c) bringing performance up to the original specifications of the software;

(d) making minor changes such as increasing field sizes.

An upgrade of a computer software package provides a new advantage to the business, so there is a new enduring benefit. Payments for upgrades must be capitalised and depreciated. Generally, an upgrade of computer software:

(a) adds new features to the software;

(b) increases its capacity or performance;

(c) extends the life of the software;

(d) provides a new version of the software that has more capacity or increased performance.

Example 5: Depreciation of an upgrade

In October 1993 Serviceco Ltd acquires Version 3 of the software programme "Modernpro" for $5,000. Since Serviceco has owned the software for only part of the year, it may deduct part of the cost of $5,000 (i.e., $1,000) as depreciation for the year ending 31 March 1994.

In July 1994, Serviceco Ltd acquires the newly-released improved Version 4 of "Modernpro" for $2,000 by trading in its existing Version 3 programme. For the year ending 31 March 1995, Serviceco Ltd may either:

(a) continue to depreciate Version 3 (as if no disposal had occurred) and commence depreciating Version 4 (from the cost price of $2,000); or

(b) add the tax written down value of Version 3 ($4,000) to the $2,000, and depreciate Version 4 based on a $6,000 adjusted tax value.

NB Section 117 of the Act does not allow an immediate write-off of the book value of Version 3, because it has been used as a trade in.

The nature of the payment in each case will determine whether it is deductible. Simply labelling a payment as a maintenance payment will not necessarily make it deductible. Maintenance will not cover situations where software obtains new features to increase capacity or performance and/or to extend its life, or where the user gets another version of the software with more capacity or increased performance.

Sometimes a payment may cover both maintenance and upgrades (whatever the payment is called). The taxpayer must then apportion the cost between the revenue and capital items.

Example 6: "Maintenance" fee includes upgrade

In August 1993 UVW Ltd acquires a software programme from Software Ltd. The two companies also enter into a two year "Programme Maintenance Agreement". Under that agreement Software Ltd receives $3,000 to provide UVW Ltd with:

(a) a telephone hot-line for user inquiries, a 24 hour bug fixing service and adjustments to formatting to meet UVW Ltd's internal documentation; and

(b) an enhanced Version 2 of the software programme when available.

The part of the fee relating to the services in (a) above will be deductible as a maintenance payment. The part of the fee that relates to the acquisition of version 2 must be capitalised until that version is acquired, and then depreciated as a cost of that enhanced programme.

Low value packages

Section 108O of the depreciation regime provides a deduction for the purchase of low value packages. This deduction is available where the total value of packages purchased from a supplier at one time is $200 or less, and the software does not form part of other software.

Software and hardware purchased for a global price

If a purchaser acquires software with hardware (with no breakdown of the price into component parts), the cost must be apportioned between the hardware and software, and each depreciated at their respective rates. The onus is on the taxpayer to make the apportionment.

Modular development

If a project is developed as a series of modules which can each be operated independently, each module can be depreciated as it is implemented.

Special depreciation rates

The depreciation rates set for software are based on an average economic life for software of 4 years. This rate has been arrived at after specialist analysis.

Taxpayers may apply to Inland Revenue for a special economic rate if they can demonstrate that the economic life of a particular software package is greater or less than 4 years. Applications for special economic rates should be made to:

> The Manager (Rulings)
> Inland Revenue Department
> Head Office
> PO Box 2198
> WELLINGTON

Section 2

Software Leased Other Than Under Specified Leases

If a taxpayer leases software under a lease which is not a specified lease, section 222E of the Act requires that the deduction of the lease payments be spread over the term of the lease. The definition of "lease" in section 222A of the Act is very broad and includes any hire or bailment of a "lease asset". Any arrangement to hire software that is not under a specified lease is likely to be covered by section 222E of the Act.

However, if an arrangement falls outside section 222E of the Act, the deduction for the payments will be determined by section 104, and the timing under section 104A (which requires the spreading of the deduction over the term of the arrangement).

Section 3
Taxpayers Who Develop Software for Sale or Licence

The business of software development includes developing software packages for the outright sale of all rights in the software (either to known or prospective clients) and developing software for a specific client but retaining copyright for multiple licensing.

A taxpayer in this business is entitled to deduct expenditure related to the development when it is incurred. Section 85 of the Act requires taxpayers to take into account, at balance date, the value of their trading stock. In the case of software developers this requires the inclusion, as income, in the taxpayer's return of:

(a) The value of work in progress (i.e., uncompleted and unbilled projects) at balance date; and

(b) The value of any completed (but unsold or unbilled) project at balance date.

The value of trading stock (including work in progress) ceases to be taken into account as income once it has been sold or billed. This is so even where the taxpayer expects to make further sales of the same programme in later income years.

Options for valuing trading stock

Section 85 of the Act gives a taxpayer the option, at the end of the income year, to value trading stock at cost price, market selling value, or replacement cost. The nature of software development is such that, in the majority of cases, the Commissioner expects the cost price option to be used as the basis of valuing work in progress. If a taxpayer elects to use a valuation other than cost, the taxpayer will need to support the validity and factual accuracy of the method.

Market selling value

Market selling value is an option available to a software developer. However, in many cases there will not be a readily determinable market selling value for an incomplete software project. A claim that all partially completed software has a nil or negligible market selling value by virtue of being incomplete, will not be accepted as a valuation under section 85 of the Act. For the market selling value option to be used the onus will be on the taxpayer to establish that value on the facts of the case.

Replacement cost

Replacement cost is also an option available to a software developer. However, there will rarely be a ready market in which a taxpayer could obtain the equivalent product. In such a case, the replacement cost will generally be equal to the cost that has already been incurred by the developer in developing the project to its current state.

Cost basis

Where a taxpayer adopts the cost basis of valuation, the Commissioner considers a partial absorption method of valuing work in progress as appropriate. In this method direct costs and an appropriate proportion of the indirect costs relating to the development project are included.

The major direct costs in developing software are personnel and machine time. Personnel cost can be determined by using a time recording system where the direct hours spent on a project by each staff member are recorded against that project. The cost of machine time, for example where mainframe systems are used in the development of the project, can be calculated on the system hours allocated to the project. The Commissioner would expect these costs to be included in direct costs but there may also be other direct costs which should be included, for example the depreciation of computer hardware dedicated to the project.

Indirect costs include all overhead costs which cannot be directly linked to the project. These may include:

(a) The costs of running the business premises; for example rates, rent, insurance, energy costs (heat, light, and power):

(b) Indirect labour costs; for example clerical and management costs attributable to the project:

(c) Indirect material costs; for example computer paper, floppy disks, printer toner.

The most appropriate method for allocating the indirect costs will be based on direct person hours allocated to each project. It is reasonable to assume that a project which takes 500 hours to complete requires a greater use of energy costs, management time and incidental running costs than a project which takes 100 hours to complete.

There may be cases where the taxpayer can show that another method is appropriate for allocating cost to indirect items. For example, where a particular software development area can be identified with a project, an apportionment based on floor space may be appropriate.

Examples 7 and 8 illustrate the method of allocation of cost to indirect costs of a development.

> ### *Example 7: Allocation of indirect costs*
>
> ABC Limited is a software development company, which produces software packages for sale to independent clients. In the last income year it worked on three packages; Projects 1 and 2 were sold before year end and Project 3 was still in production. How should it value the work in progress on the uncompleted Project 3?
>

The company employs three staff. They work full-time on the projects (1,500 hours per staff member).

Direct development time

	Project 1	Project 2	Project 3	Total
Bill	1,000	500	0	1,500
Jane	1,000	200	300	1,500
Susan	0	800	700	1,500
Total	2,000	1,500	1,000	4,500

Overhead costs

Energy	$5,000
Premises	$12,500
Support Staff (secretarial)	$50,000
Management	$55,000
Incidentals	$1,000
Total	$123,500

Allocation:

Total development hours = 4,500

$$\text{Project 3} = \frac{1,000 \text{ hours}}{4,500 \text{ hours}}$$

$$= 0.222$$

0.222 x $123,500 = $27,417

Therefore, besides the direct costs of production allocated to Project 3, an additional $27,417 for indirect costs must be added to the cost of the project.

Example 8: Allocation of indirect costs

John works from home as a free lance software developer. At year end, he is half-way through a project.

John has set aside one room in his house in which he carries out his work. He is therefore entitled to apportion a percentage of the costs of his house against his business.

Work area:	15 square metres
Total floor space of house:	150 square metres
Percentage of work area	10%

House costs which John could expect to deduct are: interest, rates, insurance, power, maintenance, and depreciation.

John has been working on this project for the last 10 weeks of the income year. His total house costs are $8,000 (excluding interest).

He should calculate the value of the work in progress as follows:

$$\frac{10}{52} \times \$8,000 \times 10\% = \$153.85$$

Interest attributable to the business does not have to be included when calculating the value of work in progress. This has to be apportioned between John's business (deductible) use and his private (non-deductible) use.

Obsolescence

Although it would be very unusual for work in progress to be written down below the valuation base adopted by the taxpayer, the Commissioner does have a discretion to accept a lower value. Under section 85(5) of the Act the Commissioner may, in the case of obsolescence, approve a value lower than the valuation adopted by the taxpayer. For the discretion to be exercised, the taxpayer must make a written application to the Commissioner within the time required to furnish a return. This application must be to the taxpayer's District Office of Inland Revenue.

Treatment of progress payments

Where a developer is entitled to bill the client for progress payments under a contract or arrangement spanning two or more income years, part of the profit must be brought into account in all the tax years concerned. The Commissioner will accept the profit emerging or percentage completed contract, basis.

Example 9: Treatment of progress payments

Software Ltd is developing software for a client over a 13 month period. The contract provides for the following payments:

	$
Project Inception August 1993	20,000
Phase I February 1994	30,000
Completion September 1994	20,000
TOTAL	70,000

The company has a balance date of 31 March. Progress on the project is not expected to proceed on an even basis. By 31 March 1994, 30% of the project is completed. Therefore, in terms of the percentage completed method, at 31 March 1994 only 30% of the total income of $70,000 should be recognised - i.e., $21,000.

Treatment of pre-application date expenses

As stated, the policy applies to expenditure incurred on or after 1 July 1993 and all costs incurred after that date must be identified. This will be so even if a project was commenced before 1 July 1993. The Commissioner will not disturb the treatment of costs incurred before that date where the taxpayer has treated those costs as expenses for tax purposes. If the taxpayer adopts a cost price basis for valuing software trading stock (including work in progress) at year end, the taxpayer must take into account only those costs incurred on or after 1 July 1993.

Example 10: Pre-application date expenses

Floppy Solutions Ltd is a software development company with a 31 March balance date. In January 1993 it began developing a new expert system programme for sale to accounting firms. The company had a policy of treating costs on development as expenses for tax purposes.

The product is completed in April 1994 and the first sales occur in the following June. The treatment of costs related to this development for the 1993 and 1994 income years is as follows:

(a) Costs incurred before 1 April 1993 - deductible in the year ended 31 March 1993:

(b) Costs incurred from 1 April 1993 to 30 June 1993 - deductible in the year ended 31 March 1994:

(c) Costs incurred from 1 July 1993 to 31 March 1994 - deductible in the year ended 31 March 1994, but taken into account as work in progress if a cost basis of valuation is adopted (under section 85) for the year ended 31 March 1994.