

YEAR 2000 EXPENDITURE – INCOME TAX DEDUCTIBILITY

PUBLIC RULING - BR Pub 98/4

This is a public ruling made under section 91D of the Tax Administration Act 1994.

Taxation Laws

All legislative references are to the Income Tax Act 1994 unless otherwise stated.

This Ruling applies in respect of section BD 2 and subpart EG of the Income Tax Act 1994.

The Arrangement to which this Ruling applies

The Arrangement is the incurring of expenditure by a taxpayer to diagnose, correct, and/or test computer software that is potentially affected by the “Year 2000 problem” in respect of that Year 2000 problem, when the software is used by the taxpayer in deriving gross income or in carrying on a business for the purpose of deriving gross income. (The “Year 2000 problem” is also known as the “millennium bug” or as “Y2K”.) The problem is the inability of certain computer software to correctly perform some or all of its functions in respect of dates after 31 December 1999, due to problems with recognising the last two digits of such years.

How the Taxation Laws apply to the Arrangement

The Taxation Laws apply to the Arrangement as follows:

- Expenditure incurred by a taxpayer in diagnosing whether software is affected by the Year 2000 problem is an allowable deduction under section BD 2(1)(b);
- Expenditure incurred by a taxpayer in training staff in the new four-digit programming methods required as a result of the Year 2000 problem is an allowable deduction under section BD 2(1)(b);
- Notwithstanding section BD 2(1)(b), expenditure incurred by a taxpayer in correcting and/or testing computer software (including embedded software) affected by the Year 2000 problem is not an allowable deduction because it is expenditure of a capital nature under section BD 2(2)(e). Instead, such expenditure must be capitalised and depreciated by the taxpayer, and the depreciation allowance will be an allowable deduction pursuant to section BD 2(1)(a) and subpart EG;
- Expenditure incurred by a taxpayer in correcting and/or testing computer software affected by the Year 2000 problem, in circumstances where the software was originally Year 2000 compliant but was previously erroneously modified so as to become non-compliant, is an allowable deduction under section BD 2(1)(b); and

- Expenditure incurred by a taxpayer in correcting and/or testing computer software affected by the Year 2000 problem, in circumstances where the taxpayer holds the software as trading stock, is an allowable deduction under section BD 2(1)(b) when the expenditure is incurred.

The period for which this Ruling applies

This Ruling will apply for the period from 1 November 1998 to 31 October 2001.

This Ruling is signed by me on the 29th day of October 1998.

Martin Smith

General Manager (Adjudication & Rulings)

COMMENTARY ON PUBLIC RULING BR Pub 98/4

This commentary is not a legally binding statement, but is intended to provide assistance in understanding and applying the conclusions reached in Public Ruling BR Pub 98/4 (“the Ruling”).

Background

The so-called “Year 2000 problem” is also known as “the millennium bug” or “Y2K”. The problem relates to the way dates are stored in computer software programs. In the 1950s and 1960s, when some of the code of many current software programs was being written, the cost of mainframe storage was prohibitively high. In an attempt to save costs, the year element of a date was stored by the last two digits of the year, rather than by using all four digits. This was considered a sensible use of resources, as at the time there was a significant period until the turn of the century (at which time the two digit standard would begin to cause problems) and many programmers would not have imagined that code written in the 1960s would still be part of computer software programs in the late 1990s.

However, the code written in the 1960s has often survived to the present day, either because the program is still operating or because the code has been “patched” into new programs. In the late 1990s the cost of storing all four digits of a year is insignificant, and new programs being coded do not need to adopt the same approach. However, at the time the software was originally written it was a sensible business decision to specify the year by using only two digits.

The problem with the changeover from the year 1999 to 2000 is that a computer may have difficulty making the logical jump that a human can in interpreting the two digits “00” as meaning the year 2000, when they come after the two digits “99” meaning the year 1999. Instead, it is most likely that the computer will consider that the year has switched over to another date such as 1900 or, for some systems, 1980. This has widespread implications, and a consensus appears to have been arrived at that the negative implications of this are very far-reaching.

The costs of making an existing non-compliant program compliant may be considerable. The costs may be significant because of the difficulty in identifying where each date field appears in the program (which program may be significantly “patched” or have poor programming records). It is possible that taxpayers will not be able to rewrite existing programs and will instead require new hardware and software, and will replace old hardware and software in doing so. Such purchases are generally on capital account and can not be deducted as expenses, but must be capitalised and depreciated instead. However, in the Ruling the focus is on the modification of existing software to work on existing hardware. The costs in making a program Year 2000 compliant come from:

- Doing remedial work;
- Testing the remedial changes; and

- Training and supervising programmers to ensure that they follow the new dates' standards.

The actual extra storage costs of making software programs year 2000 compliant are not significant.

For the purposes of the Ruling and this commentary “computer software” includes embedded software, that is software embedded in, and integral to, the operation of other assets. Examples of such embedded software include the software that operates lifts or air-conditioning units in buildings.

The general tax treatment of computer software was dealt with in May 1993 when the Commissioner issued a policy statement on the appropriate tax treatment of computer software (*Income Tax Treatment of Computer Software* Appendix to TIB Volume Four, No. 10 (May 1993)). To the extent the Ruling and this commentary are inconsistent with that policy statement, the Ruling and commentary supersede that policy statement.

Classification of Year 2000 problem

A key issue in respect of Year 2000 expenditure and the Year 2000 problem is whether the problem is a bug in the program, or whether it is an inherent limitation in the existing life of the program. This is important because it is generally assumed that expenditure on the removal of a bug from a computer software program is on revenue account.

The Year 2000 problem is an inherent limitation on the existing life of the program, rather than a bug in the program. When a program has been produced so that it will only last until the end of 1999, this is not properly to be regarded as a bug because, all other things being equal, the program will operate effectively until that time. At the end of the period, when the program ceases to operate (or at least ceases to operate as it should) it has served the purpose it was programmed for, even if the purchaser or user did not expect it to cease operation so early. This is also not a programming error, as the programming decision to store date fields in this way was a deliberate practice to minimise the storage requirements of date fields.

A similar point is made in the Government Administration Committee's report *The Y2K Inquiry: Inquiry into the year 2000 date coding problem* (April 1998). At page 5 the report states:

The Y2K problem has been referred to continuously in the media by such inappropriate terms as the “Millennium Bug” or the “Year 2000 bug”. It is time to debunk this characterisation of the problem. **The Y2K problem is not a “bug”. A bug indicates a foreign body invading the systems of its host. The Y2K problem was a design choice included as an integral part of a system. Organisations need to view the problem as a deliberate design choice that now requires correction and not as an infection by an outside agent.** The Y2K problem is a product quality problem rather than an unforeseen one. (Emphasis added.)

It is important to note that the interpretative view taken in the Ruling (and this commentary) does not implicitly assume that programs were consciously designed to

only last until the year 2000 and that purchasers accepted and understood such a limitation. The point is rather that programmers were aware of the limits on the life of their software. Further, factually there is a limit on the life of the software, which may not have been always a conscious programming decision (where programmers just adopted the industry norm without thinking through the implications) nor always consciously accepted by the purchaser. There is also not an implicit assumption that Year 2000 expenditure leads to the creation of a new asset. It is accepted that the old asset continues to exist. However, as a result of the Year 2000 expenditure the asset now (as a matter of fact) has an increased lifespan.

It may also be suggested that the appropriate approach is to consider deductibility from the perspective of the taxpayer incurring the expenditure. However, the better view of the law is that a person's mistaken belief as to the expected lifespan of computer software is not a basis on which to allow deductibility of Year 2000 expenditure. In allowing deductions, the focus is on an objective classification of the expenditure and what it achieves. So what is relevant is whether objectively the expenditure effects an increase in the lifespan of computer software, beyond what it was objectively originally designed to do. The honest, but mistaken, view of the purchaser is not determinative.

Support for this objective view comes from cases such as *Buckley & Young v CIR* (1978) 3 NZTC 61,271 (CA) where Richardson J noted in discussing the equivalent of section BD 2(1)(b) that determining deductibility under the general provisions requires determining the true character of the payment. This suggests an objective inquiry as to what the payment achieves. There is of course a subjective element in determining deductibility as well. As Barber DJ said in *Case K75* (1988) 10 NZTC 602, 608:

I consider that I must apply a mixed subjective and objective test, and it is not sufficient for me to be satisfied that from the subjective view point of the objector the expenditure was necessary in the business interests of the objector. A company must be entitled to decide whether certain expenditure is "bona fide" in the interests of its business; but whether that expenditure is intrinsically of a business or private character requires some objectivity. My determination here would not alter if I were to apply an objective test only.

Legislation

Section BD 2(1) provides the primary test for deductibility of expenditure:

An amount is an allowable deduction of a taxpayer

- (a) if it is an allowance for depreciation that the taxpayer is entitled to under Part E (Timing of Income and Deductions), or
- (b) to the extent that it is an expenditure or loss
 - (i) incurred by the taxpayer in deriving the taxpayer's gross income, or
 - (ii) necessarily incurred by the taxpayer in the course of carrying on a business for the purpose of deriving the taxpayer's gross income, or
 - (iii) allowed as a deduction to the taxpayer under Part C (Income Further Defined), D (Deductions Further Defined), E (Timing of Income and Deductions), F (Apportionment and Recharacterised Transactions), G (Avoidance and Non-Market Transactions), H (Treatment of Net Income of Certain Entities), I (Treatment of Net Losses), L (Credits) or M (Tax Payments).

Section BD 2(2)(e) provides certain prohibitions on expenditure:

- (2) An amount of expenditure or loss is not an allowable deduction of a taxpayer to the extent that it is
- ...
- (e) of a capital nature, unless allowed as a deduction under Part D (Deductions Further Defined) or E (Timing of Income and Deductions), or

Section EG 1(1) provides for deductions on account of depreciation:

Subject to this Act, a taxpayer is allowed a deduction in an income year for an amount on account of depreciation for any depreciable property owned by that taxpayer at any time during that income year.

Section OB 1 defines “depreciable property” and “depreciable intangible property”:

“Depreciable property”, in relation to any taxpayer, -

(a) Means any property of that taxpayer which might reasonably be expected in normal circumstances to decline in value while used or available for use by persons -

- (i) In deriving gross income; or
- (ii) In carrying on a business for the purpose of deriving gross income; but

(b) Does not include -

- (i) Trading stock of the taxpayer;
- (ii) Land (excluding buildings and other fixtures and such improvements as are listed in Schedule 16):
- (iii) Financial arrangements;
- (iv) Intangible property other than depreciable intangible property;
- (v) Property which the taxpayer has elected to treat as low value property under section EG 16:
- (vi) Property the cost of which is allowed as a deduction under any of sections BD 2(1)(b)(i) and (ii), DJ 6, DJ 11, DL 6, DM 1, DO 3, DO 6, DO 7, DZ 1, DZ 3, EO 5, EZ 5, and EZ 6, or by virtue of an amortisation or other similar deduction allowed under any section of this Act such as sections DJ 9, DL 2, DO 4, DO 5, and EO 2, other than sections EG 1 to EG 15 and section EG 18:
- (vii) Property which will not, in respect of the taxpayer, decline in value as a result of any right of the taxpayer to receive compensation for any decline in value on disposition of that property;
- (viii) Property the cost of which was or is allowed as a deduction in any income year to any other taxpayer under any of sections DO 3, DZ 2, DZ 3 and DZ 4 of this Act (or any of sections 127, 127A and 128 of the Income Tax Act 1976 or sections 119, 119D and 119G of the Land and Income Tax Act 1954):

“Depreciable intangible property” means intangible property of a type listed in Schedule 17, which Schedule describes intangible property that has -

- (a) A finite useful life that can be estimated with a reasonable degree of certainty on the date of its creation or acquisition; and
- (b) If made depreciable, a low risk of being used in tax avoidance schemes:

Schedule 17 lists the types of depreciable intangible property caught by the definition in section OB 1:

Depreciable Intangible Property

1. The right to use a copyright.

2. The right to use a design or model, plan, secret formula or process, or other like property or right.
3. A patent or the right to use a patent.
4. The right to use land.
5. The right to use plant or machinery.
6. The copyright in software, the right to use the copyright in software, or the right to use software.
7. The right to use a trademark.
8. Management rights and licence rights created under the Radiocommunications Act 1989.
9. A consent granted under the Resource Management Act 1991 to do something that otherwise would contravene sections 12 to 15 of that Act (other than a consent for a reclamation), being a consent granted in or after the 1996-97 income year.

Application of the Legislation

In applying the legislation to expenditure incurred in respect of the Year 2000 problem there are four useful sources of guidance:

- General case law on the capital/revenue distinction;
- General case law dealing with the distinction between repairs and maintenance, and capital improvements to assets;
- International accounting treatment of Year 2000 expenditure; and
- Other revenue authorities' pronouncements on the tax treatment of Year 2000 expenditure.

As well as these sources of guidance, this commentary also considers various Revenue authority publications on analogous matters.

Capital/revenue distinction

One of the leading New Zealand cases dealing with the capital/revenue distinction is the Court of Appeal decision in *CIR v McKenzies New Zealand Limited* (1988) 10 NZTC 5233. The facts of the case are not important in the context of Year 2000 expenditure, but the comments of the five member Court of Appeal (delivered by Richardson J) are important for the approach they take in deciding whether an amount is expenditure of a capital or revenue nature. At page 5235 the Court said:

In deciding whether expenditure is capital or income the approach generally favoured by the courts in recent years is exemplified in the following observations of Lord Pearce in *BP Australia Ltd v Commissioner of Taxation of the Commonwealth of Australia* [1966] AC 244 at pp264-265:

“The solution to the problem is not to be found by any rigid test or description. It has to be derived from many aspects of the whole set of circumstances some of which may point in one direction, some in the other. One consideration may point so clearly that it dominates other and vaguer indications in the contrary direction. It is a commonsense appreciation of all the guiding features which must provide the ultimate answer. Although the categories of capital and income expenditure are distinct and easily ascertainable in obvious cases that lie far from the boundary, the line of distinction is often hard to draw in borderline cases; and conflicting considerations may produce a situation where the answer turns on questions of emphasis and agree. That answer:

‘depends on what the expenditure is calculated to effect from a practical and a business point of view rather than upon the juristic classification of the legal rights, if any, secured employed or exhausted in the process’.

per Dixon J in *Hallstroms Pty Ltd v Federal Commissioner of Taxation* (1946) 72 CLR 634, 648. As each new case comes to be argued felicitous phrases from earlier judgments are used in argument by one side and the other; but those phrases are not the deciding factor, nor are they of unlimited application. They merely crystallise particular factors which may incline the scale in the particular case after a balance of all the considerations has been taken.”

Amongst the factors weighed by the judicial committee in *BP Australia* were: (a) the need or occasion which called for the expenditure; (b) whether the payments were made from fixed or circulating capital; (c) whether the payments were of a once and for all nature producing assets or advantages which were an enduring benefit; (d) how the payment would be treated on ordinary principles of commercial accounting; and (e) whether the payments were expended on the business structure of the taxpayer or whether they were part of the process by which income was earned.

The Court in *McKenzies* noted that the Privy Council decision in *BP Australia* was recognised by the New Zealand Court of Appeal in *CIR v LD Nathan and Co Limited* [1972] NZLR 209 and also in *Buckley and Young Limited v CIR* [1978] 2 NZLR 485.

The principles from *BP Australia* which Richardson J summarised in *McKenzies*, were adopted by Gallen J in *Christchurch Press Company Limited v CIR* (1993) 15 NZTC 10,206. The application of those principles is well illustrated by both *BP Australia* and *Christchurch Press*.

In *BP Australia* the taxpayer company was a petrol wholesaler. In 1951 its existing method of selling petrol through independent petrol retailers was thrown into turmoil when Shell Australia began “tying” retailers to exclusive deals to sell Shell products. This led to a dramatic decline in retail outlets for BP. To ensure that it had a retail distribution network, BP Australia began paying trade-ties to petrol retailers so that those retailers would deal exclusively in BP’s products for a fixed period of time. The question was whether such expenditure was on revenue account or capital account.

In *Christchurch Press* the taxpayer was a newspaper publisher. It employed electricians and fitters and turners to service and maintain the company’s printing presses and other machinery used in producing the newspaper. In 1985 the taxpayer purchased a sixth unit and a half deck (the meaning of which terms was not explained in the case) to increase and enhance the printing capacity of the press. Some of the electricians and engineers were employed to install and wire up the new equipment. In the same year the taxpayer carried out a replacement of the electrical wiring in its premises, using its own staff to carry out that work. The Commissioner denied deductions for wages paid to such staff while undertaking both projects.

Different types of expenditure

In applying the case law to Year 2000 expenditure the Ruling distinguishes between diagnosis work, correcting and testing work, and training expenditure. In terms of the Commissioner’s policy statement on computer software these categories are analogous to pre-development, development, and post-development work for taxpayers who acquire, commission, or develop software for their own use (see section 1 of the policy statement).

The following discussion relates to Year 2000 expenditure incurred on correcting and testing software. A discussion of the case law as it applies to expenditure incurred on diagnosis and training follows.

The need or occasion which called for the expenditure

In *BP Australia* the need or occasion which called for the expenditure was a structural change in the way that petrol retailers did business. In particular, there was a change from independent retailers that sold petrol towards tied service stations. In looking at this factor, the Court said that the need or occasion for the expenditure came from the fact that marketing in the petrol trade in 1951 changed its nature suddenly but for sound commercial reasons. The change was in accord with “modern tendencies in commerce”, with the petrol supply trade changing from a short-term trade to a long-term trade. Part of the change meant that orders for BP’s petrol would only in future be obtainable from tied retailers, and as a result it must obtain such ties with potential retailers. The object of this expenditure was not to achieve the tie but to achieve the orders that would flow from the tie. At page 8 of the Australian Tax Decisions report ((1965) 14 ATD 1) the Privy Council said:

To obtain ties it [BP] had to satisfy the appetite of the retailers by paying out sums for a period of years, whose amount was dependent on the estimated value of the retailer as a customer and the length of that period. The payment of such sums became part of the regular conduct of the business. It became one of the current necessities of the trade.

This was one of the factors that lead the Court to find that the tie paid was deductible revenue expenditure.

In *Christchurch Press* the expenditure involved was the installation of a new unit in the taxpayer’s printing presses. The Commissioner sought to deny deductions to the company for wages of staff involved in installing the units, considering that the better view was that the amount should be capitalised to the cost of the unit and later depreciated. Counsel for the taxpayer sought to argue that the need or occasion behind the expenditure was the contracts of service under which the taxpayer had employed the workers. However, the Court found that the principal purpose of the labour for which wages were paid was the installation of a capital asset (page 10,210). Accordingly, the factor supported categorisation of the expenditure as of a capital nature.

Year 2000 correction and testing expenditure would seem to be more closely analogous to *Christchurch Press* than *BP Australia*. The need or occasion which calls for the expenditure is the arrival of the year 2000, and the potential risks to the taxpayer’s computer system as a result of that date. Rather than being a normal expense incurred in the earning by the taxpayer of income as in *BP Australia*, the expenditure is of a one-off nature incurred to ensure that computer systems continue to operate after the year 2000. It is probably even less recurrent than *Christchurch Press*, where presumably a new unit was required every now and then.

Were the payments made from fixed or circulating capital?

In *BP Australia* the Privy Council considered that the test of whether sums were payable out of fixed or circulating capital tended in that case to favour the payments as revenue expenditure. The members of the Judicial Committee said (14 ATD 1, 8) that fixed capital is that on which a taxpayer looks to get a return by its trading

operation, and circulating capital is that which comes back in the taxpayer's trading operations. Their Lordships considered that the amounts paid by BP to a service station owner were sums which had to come back penny by penny with every order during the period in order to reimburse and justify the particular outlay for the tie. They concluded that the lump sums were part of the consistent demand that must be answered out of the returns of the trade. As such, the Privy Council found that the sums were payable out of circulating capital.

In *Christchurch Press* the Court considered the tests in terms of whether the expenditure could properly be described as pertaining to fixed or circulating capital. At page 10,210 Gallen J concluded that the expenditure pertained to fixed capital, as it was as much a part of the capital asset as it would have been if the appellant had paid a contractor to effect the installation in either case. He said that if a contractor had been so paid, it could not have been said that the payment was not a capital payment.

The way the test was used in *Christchurch Press* is different to the way it was used in *BP Australia*. In *Christchurch Press* the focus was on the end product of the expenditure, while in *BP Australia* the focus was on the source of the funds to pay for the expenditure.

For Year 2000 correcting and testing expenditure the payments may be being made from fixed capital, rather than circulating capital. In the words of the Privy Council in *BP Australia*, the sums paid do not come back in the taxpayer's trading operations; instead they are amounts on which the taxpayer seeks to get a return in its trading operations. In terms of the formulation of the test in *Christchurch Press*, the payment gives rise to a new or improved capital asset that becomes part of the fixed capital by which the owner makes a profit. The new or improved capital asset is the year 2000 compliant computer system.

It may be that in *Christchurch Press* the test was not readily applicable to the facts of the case. It also may be that the test is not as useful as the other tests in determining whether Year 2000 expenditure is capital or revenue. In many cases it will be very easy to switch between financing an asset from circulating capital to financing it from fixed capital, irrespective of the nature of the asset financed. Such easy substitution undermines, to an extent, the usefulness of the test.

Were the payments of a once and for all nature producing assets or advantages which were an enduring benefit?

In *BP Australia* their Lordships considered that the expenditure in gaining ties with retailers was recurrent, and not of a once and for all nature. They cited *Vallambrosa Rubber Co Ltd v Farmer* (1910) 5 TC 529 where the Court had said that capital expenditure is a thing that is going to be spent once and for all, and revenue expenditure is a thing that is going to recur every year. They saw the expenditure as being made to meet a continuous demand in the trade. These were matters that were connected with the ever-recurring question of marketing and customers. Accordingly, the Lordships appeared to consider that this factor favoured a revenue classification. In terms of whether or not the payments gave rise to an enduring benefit, the

Lordships did not appear to make a final decision other than to distinguish a large number of cases put to them by the Commissioner.

In *Christchurch Press* the Court stated that the regular payment of wages did not mean that the expenditure was of a revenue nature. Gallen J said that regular payments will sometimes be payments that relate to the ordinary daily outgoings of a business, but sometimes they may relate to a particular capital expenditure and be coloured by that. He noted that the work for which the workers were paid was done to bring into use the new equipment that was clearly both an asset and one intended to be an enduring benefit.

For Year 2000 correction and testing expenditure this factor is probably the strongest factor favouring a capital classification of the expenditure. The payments will tend to be of a once and for all nature as they will only be required to solve the Year 2000 problem and not subsequently. This is so irrespective of the amounts that make up the Year 2000 expenditure. Thus, although there may be regular payments to contractors and employees to deal with the problem (the very nature of the expenditure relates in the main to labour costs), in aggregate those costs are of a once and for all nature. Moreover, the benefit of the Year 2000 expenditure does tend to be an enduring benefit. It enables computer systems that previously would have ceased to operate effectively at 1 January 2000 or earlier to continue in operation for many years thereafter.

How the payment is treated on ordinary principles of commercial accounting

In *BP Australia* the Privy Council noted that the sums paid to retailers were entered into the profit and loss account by BP's accountants. The Privy Council considered it would have been inappropriate to put the sums on the balance sheet. However, they accepted it was misleading to put the whole sum into one year's expenses. They contemplated the idea of deducting the payments and adding back the unexpired value, but concluded that accountants did not follow this practice. Allocation to revenue was the "slightly preferable" view.

In *Christchurch Press* Gallen J noted that there was no evidence on the appropriate accounting treatment of such a payment. However, his Honour referred to a comment of Lord Donovan in *IRC v Land Securities Investment Trust Limited* [1969] 2 All ER 430, 433 (PC) where his Lordship said that where a company used its own employees to build an extension to its factory, the accountant should debit the wages to the capital account relating to the extension. Although the comments of Lord Donovan were criticised by counsel for the taxpayer in *Christchurch Press*, the Court considered it was at least an indication of what the position was when the case was decided.

This is the only factor of the five that favours Year 2000 correction and testing expenditure being expensed. Accounting bodies in the United States, the United Kingdom, and Australia all favour expensing Year 2000 expenditure, rather than its capitalisation and subsequent depreciation. This is discussed later.

Were the payments expended on the business structure of the taxpayer or were they part of the process by which income was earned?

In *BP Australia* the Privy Council considered that the amounts expended by BP on acquiring trade ties were not expended on the business structure of the taxpayer, but were part of the process by which income was earned. This was consistent with the earlier comments of their Lordships that the expenditure was intended to assist BP in achieving orders and selling petrol.

In *Christchurch Press* the Court found that the expenditure was incurred on the business structure of the taxpayer. Gallen J accepted that the expense was intended to improve the production of the newspaper, but that was secondary to the construction of a capital asset which was itself designed to further that end of improving the newspaper.

Year 2000 correction and testing expenditure is expenditure designed to enhance the business structure of the business in question, rather than being part of the process by which income is earned. The expenditure is designed to ensure that the structure of the business remains fully functioning after 1 January 2000, and to ensure that the business of earning profits from the use of fixed assets can continue at full efficiency. Given the potential business risks of having key accounting, invoicing, and information systems down until new system could be created, or the old system revised, solving these risks point to a capital classification.

Summary

The indicative factors discussed above favour classification of Year 2000 correction and testing expenditure as of a capital nature. The key factors favouring this are:

- That the need or occasion giving rise to the expenditure is of an unusual and unique nature.
- That the expenditure is for once and for all and gives rise to an enduring benefit, namely the prolonged existence of computer systems beyond the year 2000.
- The payments are expended to bolster the business structure of the taxpayer.

There are two exceptions to this. The first of these is that Year 2000 correction and testing expenditure incurred by a taxpayer in circumstances where the software was originally Year 2000 compliant but was previously erroneously modified so as to become non-compliant is an allowable deduction under section BD 2(1)(b). Such expenditure is deductible on the basis that the expenditure simply restores the objectively determined original lifespan of the software. In such circumstances there is no addition to the asset's lifespan, instead the previous modifications inadvertently reduced the lifespan.

The second exception is that Year 2000 correction and testing expenditure incurred by a taxpayer in circumstances where the taxpayer holds the software as trading stock is an allowable deduction under section BD 2(1)(b) when the expenditure is incurred.

Diagnosis and training expenditure

As well as the actual expenditure incurred in making a non-compliant system compliant (the reprogramming work), there is expenditure incurred in diagnosing whether a system has a Year 2000 problem or not, and expenditure in training staff in the new programming standards required as a result of the solution to the Year 2000 problem.

In terms of the diagnosis of a Year 2000 problem, it is part of a business's normal expenditure to investigate whether or not key business systems are in a good state of operation. Many of the business's computer systems need to be reviewed throughout their lives to ensure that they are performing, and will continue to perform, in the manner required. Occasionally an exterior threat requires the system to be examined. This could be a computer virus, or as with the Year 2000 problem an external date-related problem. Such expenditure meets the basic test of deductibility in section BD 2(1)(b) while not being denied deductibility under section BD 2(2)(e) as expenditure of a capital nature. Such expenditure is the type of expenditure incurred by a prudent business to ensure the on-going viability of its business systems.

The five tests for capital expenditure extracted from *BP Australia* and discussed above suggest that diagnosis expenditure is of a revenue nature.

The first factor is the need or occasion that called for the expenditure. Although the Year 2000 is itself a one-off occurrence, businesses must consider the viability of their systems more regularly than at the approach of the year 2000. Consideration of the on-going usefulness of systems is a regular part of a business's undertaking.

The second factor is whether the expenditure is fixed or circulating capital. However, as discussed above this test is less useful than the others given the easy substitution of funding for projects.

The third factor is the enduring benefit test. The expenditure incurred in testing a system for Year 2000 compliance does not give rise to an asset or advantage of an enduring benefit. All it does is give the business information and choices that it needs to make in respect of that software. It is what the business does with that information that can give rise to an enduring benefit. However, simply knowing that a system will lose its effectiveness on the arrival of the year 2000 is not an enduring advantage or benefit.

The fourth factor is the accounting treatment of the expenditure. As discussed elsewhere in this report, international accounting treatment favours expensing all Year 2000 expenditure.

The fifth factor questions whether or not the payment relates to the business structure of a taxpayer or the process by which income was earned. It is difficult to link diagnosis expenditure with the business structure of a taxpayer. While it enables taxpayers to know whether their business structure is at risk, actually finding out that a system is or is not Year 2000 compliant does not add anything to the business structure.

As a result of objectively considering each of these five factors, and particularly given that they all favour a revenue classification, diagnosis expenditure will be deductible under section BD 2(1)(b) (assuming the other requirements of the section are met) and will not be prohibited from being an allowable deduction by virtue of section BD 2(2)(e).

In practice it may be difficult to draw a line between expenditure on diagnosing a Year 2000 problem, and expenditure on correcting and testing that problem. The type of diagnosis expenditure discussed above relates to that part of the project that determines whether the system being examined will work past the year 2000, but without going into a line by line examination of the software code to discover where the particular problems are. Such expenditure involves diagnosis of whether a system is Year 2000 compliant or not, rather than diagnosis in the sense of a detailed examination of computer code to decide where in the particular program remedial work needs to be undertaken. It is not acceptable to go through code line by line identifying every area where the system needs a change and then describe this as diagnosis expenditure for the purpose of applying the Ruling and claiming the expenditure as deductible. Such work is actually analysing the program to see where and what the problems are, and goes beyond an overview diagnosis to see if there is a problem.

The correcting and testing expenditure is that expenditure incurred in determining the required recoding, undertaking that recoding, and testing that recoded program.

There will not be a great deal of training expenditure required where Year 2000 expenditure simply allows software to continue with the same functionality it had prior to the expenditure, as the users of the software will not have any new training needs. However, programmers may need to be trained in the new programming standards required as a result of the solution to the Year 2000 problem. Expenditure in training staff on the most appropriate programming methods is considered to be part of a business's standard training expenditure and is deductible if the other tests in section BD 2(1)(b) are met.

Remaining analysis

The remainder of this commentary relates to testing and correction expenditure only, because it has already been determined that the other expenditure incurred with respect to the Year 2000 problem (diagnosis and training expenditure) is deductible under section BD 2(1)(b). The remaining analysis considers whether correcting and testing expenditure may be deductible on some other ground, which may not be precluded by the capital/revenue distinction.

Repairs and maintenance

Inland Revenue's policy statement on repairs and maintenance, in TIB Volume Five, No. 9 (February 1994) at page 1, was intended to explain the then new depreciation regime, which replaced the previous section 108 of the Income Tax Act 1976. The old section 108 specifically provided for the deduction of amounts spent on repairs

and alterations. The new regime did not provide specifically for these deductions. The policy statement made the point that, in practice, what was deductible under the old section 108 and what would be deductible on revenue account under the general provisions of the Act would not differ to any large degree. The only difference anticipated was that alterations that did not increase the value of an asset might be on capital account under the general provisions of the Act, whereas they were deductible under the old section 108.

The policy statement provided for the following key principles:

- Expenditure on repairs, maintenance, alterations etc., must be on revenue account for it to be deductible.
- Capital expenditure is not deductible, but is subject to the normal depreciation rules.
- Expenditure required to maintain an asset in the condition it was when the taxpayer acquired it will be on revenue account, and therefore deductible.
- The replacement of a capital asset will be capital expenditure.
- Expenditure on an asset over and above making good wear and tear will be capital expenditure.

These principles were based on case law, subsequently discussed in the policy statement. However, in the context of computer software there is some doubt as to the applicability of much of the case law dealing with repairs and maintenance. For example, the concept of fair wear and tear has no real meaning for computer software, except, possibly, in situations where external events such as computer viruses or power surges affect the operation of a program. While the software may become outdated or ineffective, it is not likely to wear and tear in the way that term is normally used. Repairs and maintenance cases may only be relevant if we were analysing the Year 2000 problem as a computer “virus”, which, as discussed in the Government Administration Committee report quoted above, is not an appropriate analysis.

In spite of these reservations some of the principles from repairs and maintenance cases are still useful. In the context of computer software, the best means to apply the principles identified in the repairs and maintenance policy statement is by looking at analogous cases.

New Zealand case law

In *Colonial Motor Company Ltd v CIR* (1994) 16 NZTC 11,361 (CA) the taxpayer owned an eight-story building which was considered an earthquake risk. It had to be either demolished or seismically strengthened. The taxpayer chose to do the latter, and undertook the work required. This included adding two concrete walls, and the refurbishment of the interior into office premises. This led to the transformation of the building from a warehouse into an office building with a 50-year economic life.

In the High Court (reported at (1994) 16 NZTC 11,060) Ellis J found that the expenditure was of a capital nature and not repairs. Although the work was not the complete replacement of the eight-storey building, it was the transformation of an unsound warehouse building into a sound commercial building with a substantial revenue-earning life. At page 11,063 he emphasised that the subject matter of the work was a building under threat of demolition which became a sound building with a 50-year life ahead of it. This is similar to Year 2000 expenditure where a program under threat of obsolescence is transformed into a programme with a potentially substantial life ahead of it.

The Court of Appeal also disallowed any deductions, but focused on the then second proviso to section 108 which allowed a deduction for “alterations” which increased the value of an asset by less than the cost of those alterations. As a result, the decision of the Court of Appeal is of less direct relevance than that of the High Court in terms of the Ruling because of its focus on now-repealed legislation. However, the Court of Appeal agreed with Ellis J that the work undertaken led to a substantial reconstruction and improvement of the original premises. Outside of the then statutory provisions, such a description of expenditure would normally be seen as being on capital account and non-deductible as a repair (see, for example, the Australian cases discussed below dealing with alterations to buildings). *Colonial Motor* favours classifying Year 2000 expenditure as on capital account.

In *Sherlaw v CIR* (1994) 16 NZTC 11,290 Doogue J dealt with expenditure incurred in relation to a boat-shed. Repairs were necessary to the slipway and floor of the shed, as well as to the piles of the building. To repile the building the roof needed to be removed so that piles could be placed through the floor. As a result of removing the roof some of it was damaged and had to be replaced because it was incapable of being repaired. The floor was relocated to a slightly higher level to allow for the new piles. At the same time as this work was going on the taxpayer decided to carry out deferred maintenance as well. The work undertaken, which the taxpayer considered to be repairs and maintenance, cost \$34,449. The work cost approximately 150% of the value of the property before the work was commenced, and involved repiling, moving the floor, replacing some of the roof, and other deferred maintenance. Notwithstanding the extent of this work, it was found to be repairs or alterations and not capital reconstruction.

It was important to his Honour’s decision that much of the materials used in the repair of the premises were second-hand materials or recycled materials from the boat-shed, and that the repairs came about as a result of gradual deterioration in an otherwise sound structure, and thus could be seen as correcting normal wear and tear. His Honour also felt that it was important that at the times the piles were repaired the taxpayer had no intention of undertaking the other work required. His Honour distinguished *Colonial Motor* on the basis that the boat-shed, after repair, remained a boat-shed of much the same size and layout as before.

In *Sherlaw* Doogue J did say that the work to replace the piles gave rise to a longer lifespan to the boat-shed than would have been the case if the work was not done. However, this is not unique to that fact situation. Almost every amount of

expenditure of repairs and maintenance has that effect. The judge also described the expenditure as “necessary maintenance”, which seems to refer to the maintenance that must be done throughout the life of an asset to ensure it lasts at least for the period it is designed for. The facts of *Sherlaw* are not considered to be analogous to the Year 2000 problem. *Sherlaw* was a case involving restoration of function, in circumstances where the loss of function was due to wear and tear, in the context of a tangible asset. The Year 2000 problem is a case involving the removal of an inherent date limitation, in the context of an intangible.

Auckland Gas Company Limited v CIR (1997) 18 NZTC 13,408 concerned the insertion of polyethylene (“PE”) pipe into the existing Auckland gas reticulation network. Williams J summarised the key facts of the case at page 13,433:

- The existing network required costly maintenance and unaccounted for gas (“UFG”) was a problem;
- The taxpayer attempted to reduce UFG and maintenance costs prior to the PE pipe insertion program, but no one technique had proved satisfactory;
- The problem of UFG had worsened with the introduction of natural gas;
- Much of the network had years of life left in it; and
- The system needed to be changed to deliver a different product at a different pressure.

Although one may have expected these factors, particularly the last, to have led to a capital classification, his Honour found that the expenditure was a repair to the network. At page 13,433, after noting that the PE pipe was almost maintenance free, had a long life, and the problem of UFG almost disappeared when it was inserted, he said:

But in this Court’s view, one of the more important aspects of the case is that the longevity of the inserted PE pipes seems unlikely to exceed what would have been the longevity of the cast iron and steel network properly maintained.

His Honour noted that prior to the PE insertion program the taxpayer had a network capable of delivering enough gas to satisfy demand, albeit with a high percentage of UFG and a significant requirement for extensive and costly maintenance. After the PE insertion program the taxpayer:

...had a network which was similarly capable of supplying sufficient natural gas at medium pressure to meet demand. It was neither more extensive nor longer lived but had the major advantages of significantly reduced installation costs than trenching, being virtually UFG-free, and having much lower repairs and maintenance costs than the existing network.

His Honour concluded the sums paid were on revenue account as a deductible repair.

The major factual difference between *Auckland Gas* and the Year 2000 problem is the finding that the “repairs” did not increase the life of the asset beyond their existing life. This distinguishes Year 2000 expenditure as such expenditure does extend an asset’s useful life, by removing an inherent limitation of the software, and the decision in *Auckland Gas* is not an impediment to a capital classification of Year 2000 expenditure.

The facts in *Auckland Gas* would normally suggest a capital classification. The expenditure gave rise to an enhanced asset (lower repairs and maintenance costs, lower UFG) with substantially different characteristics to the old asset (smaller diameter, suitable for pumping gas at a higher pressure). Indeed, the gas was travelling through a different asset, the PE pipe rather than the old cast iron mains.

(The *Auckland Gas* decision has been appealed to the Court of Appeal by the Commissioner.)

Since the *Auckland Gas* decision there have been two further High Court cases that suggest some unease with the decision. In *Hawkes Bay Power Distribution Limited v CIR* (1998) 18 NZTC 13,685 the taxpayer incurred expenditure in laying electricity cables underground to replace electricity lines that were previously carried above the ground on poles. The taxpayer considered the expenditure was deductible as a repair and did not need to be capitalised as an improvement. The High Court found the expenditure was not a repair, as it was the creation of a new asset with different physical characteristics.

The taxpayer attempted to rely on a “functionality” test on the basis that each piece of the network could not function on its own and could not be treated as a separate asset. At page 13,702 Goddard J noted that the functionality test and its kindred “profit earning structure” test have not found favour with the Courts with one exception, and that exception was the decision in *Auckland Gas*. She favoured identifying each particular job as an asset. Her Honour concluded on the same page that:

With respect to Williams J [the judge in *Auckland Gas*], however, it seems the tests he applied are contrary to the approach that has been consistently taken by the Courts.

In *Poverty Bay Electric Power Board v CIR* (1998) 18 NZTC 13,779 the facts were substantially similar to the *Hawkes Bay Power* case, albeit in the context of the Poverty Bay area. At page 13,794 Ellis J noted that he shared Goddard J’s reservations about the decision in *Auckland Gas* and concluded that the work was of a capital nature.

The New Zealand repairs and maintenance cases discussed favour a capital classification of Year 2000 expenditure. *Colonial Motor* illustrates that expenditure that transforms an asset, including an extension of its lifespan, will be on capital account. *Sherlaw* involved a restoration of individual components of a boat-shed, without any change of function, to ensure the shed continued to exist for its originally designed lifespan. In circumstances where such necessary maintenance is undertaken, expenditure is more likely to be on revenue account. The decision in *Auckland Gas* seems to have turned on the Court’s finding that the work undertaken did not increase the lifespan of the system. If the Court had found that the work did increase the lifespan it seems likely that the result would have been that the work was on capital account. The case must be treated with some caution as the facts would normally have suggested a capital classification, and the Courts in *Hawkes Bay Power* and *Poverty Bay Electric Power Board* have both questioned the reasoning in the decision.

Canadian case law

A series of Canadian cases have found that expenses incurred on altering assets because they did not comply with requirements of various government agencies have been non-deductible capital expenditure rather than repairs. These cases are analogous to Year 2000 expenditure, because they focused on a taxpayer being involved in expenditure imposed by an outside requirement that did not necessarily improve the taxpayer's asset. These cases include *Riggs Motor Sales Ltd v MNR* (1954) 10 Tax ABC 219 (taxpayer had to remove petrol pumps from the municipal pathway in front of its main premises to comply with Department of Highways order), *MNR v Lumor Interests Limited* [1959] CTC 520 and *The Richmond Building of London Limited v MNR* (1962) 30 Tax ABC 203 (taxpayers incurred expenditure on upgrading elevators that would otherwise be condemned), and *The New Anchor Hotel v MNR* [1976] CTC 2428 (taxpayer installed a new heating system which removed the risk of the hotel being closed if the old system failed). In *New Anchor Hotel* the Tax Review Board considered that the new heating system prolonged the life of the hotel and was of a capital nature.

Some of these Canadian cases would seem to present a stronger case for deductibility of expenditure than Year 2000 expenditure. In some of the cases the assets in question were working correctly, but external requirements meant they had to be changed to continue operating. Still the courts found the expenditure to be capital. This would have been a stronger case for deductibility than Year 2000 expenditure where there has been no change of external circumstances, but the arrival of a date that was always going to stop the program functioning correctly.

A useful decision for showing the distinction between capital expenditure and revenue expenditure in a computer context is *Central Amusement Company Limited v Canada* [1992] 1 CTC 218. The taxpayer owned between 900 and 1,000 video and other arcade games, which it placed in various locations within Canada. The games cost approximately \$4,500 each. The games maximised earnings when they were new, but as they became more familiar to their users frequency of play and income declined. For \$750 each, the taxpayer was able to replace the circuit boards in the games using conversion kits, thereby creating new games that then satisfied the market for several more months. In 1983 the taxpayer spent \$175,026 on the conversion kits which it deducted. The Minister considered that the amount was capital expenditure that should be added to the capital cost of the assets.

The Federal Court held that the amount was currently deductible. The Court noted the characteristics of a capital expenditure; it is made once and for all, it offers more than a temporary or passing advantage, and its cost in relation to the cost of the whole asset is usually significant. However, the Court noted that the installation of new circuit boards was done on a continual and recurring basis, the advantage gained from the installations was temporary (usually six to eight months), and the cost of the conversion kits was not a major component in relation to the value of the machines as a whole.

Superficially the expenditure in *Central Amusement* and expenditure for Year 2000 problems are similar. In both cases the expenditure is intended to update and extend the life of assets. However, the similarities are only superficial. The video games that were updated in *Central Amusement* were updated on a regular basis, with the update having a commercial life of approximately six to eight months after which the income from each machine returned to its pre-replacement levels. (This was for two reasons: first, because the users of the game had learnt to master the new game and could play longer, and second because the users lost interest with the game and stopped playing it.) Thus updates of the games were a regular occurrence. As a result of this the expenditure on updating the video games was not once and for all and did not bring into account an asset of an enduring nature. Really the purpose of the expenditure in *Central Amusement* was to continue to make use of the physical equipment in which the circuit boards were housed (that is, the game box). It was not the software that was being updated; indeed the old software was dumped for a completely new game.

This is quite different to Year 2000 expenditure where it is intended that alterations made to the computer software will be a one-off and will last for a considerable period of time. As a result the factors that were relevant in the *Central Amusement* case do not apply to Year 2000 expenditure.

English case law

The fact that Year 2000 expenditure will prolong the useful life of computer software programs suggests that it is more than simple repairs or maintenance, and hence that it is not deductible expenditure. This is supported by the English case of *ACT Construction Limited v Customs and Excise Commissioners* [1979] 2 All ER 691 (QBD); [1981] 1 All ER 324 (CA); [1982] 1 All ER 84 (HL).

The taxpayers carried out work on a number of buildings that had been damaged by subsidence. The original foundations of the buildings did not comply with modern building regulations, and the work of correcting the subsidence could not be carried out merely by repairing or replacing the original foundations. Additional foundations were necessary. As a result the existing foundations were left unaltered. The case was a VAT case and the issue was whether the work carried out was repairs and maintenance and therefore standard-rated or whether the services supplied were those of alteration of a building and therefore zero-rated. At page 695 of the QBD decision the Court said:

But where alterations, additions, substitutions, or improvements to a building are made, I think the question must be asked whether the building after the work is done is something substantially different in character from that which it was before ... But where the work is to replace the building which exists with something substantially and significantly different in character it can no longer properly be called repairs or maintenance.

The Court considered a number of tests as to whether work has altered the character or nature of the premises so as to favour a capital classification of the work. The Court asked whether the work would:

- Substantially alter the life of the building;
- Significantly affect its saleability;

- Significantly affect its market value; or
- Make good a building which had always up to that time been considered defective in the sense that it did not comply with modern building regulations.

At page 696 the Court concluded that the character and nature of the premises were altered by the work done, were therefore not repairs and maintenance, and so were zero-rated.

In the Court of Appeal, per Brandon LJ, the Court upheld the Queen's Bench Division's decision. The work done by the taxpayer was entirely new work, involving a radical and fundamental alteration to the construction of the building. Such work was clearly not capable of being maintenance.

In the House of Lords consideration was given both to "repairs" and "maintenance" unlike the Queen's Bench Division and the Court of Appeal which only considered "maintenance" in any detail. Lord Roskill delivered the judgment of their Lordships and said that "repairs" and "maintenance" may often overlap and are not used in antithesis to one another. At page 88 his Honour said:

My Lords, I stress, like Brandon LJ, that this was new work which converted buildings which, apart from this work, would have had a short life into building which, as a consequence of this work, became endowed with a long life. This consequence was achieved only by the instalment of a new structure on which the building thereafter rested ... I am unable to see how this underpinning can possibly be classed as "repairs or maintenance" within the ordinary meaning of those words.

This case favours classifying Year 2000 expenditure as non-deductible capital expenditure. The tests put forward in the Queen's Bench Division suggested that expenditure will be capital in nature when it substantially alters the life of an asset or makes good an asset which has always up to that time been considered defective in some way. Both these considerations apply equally to Year 2000 expenditure. Year 2000 expenditure has the functional effect referred to in the tests put forward in *ACT Construction*.

Australian case law

In *BP Oil (Bulwer Island) Limited v FCT* 92 ATC 4031 (Federal Court) one of the issues was whether the taxpayer was entitled to a deduction for the cost of encasing wooden piles in concrete to stop marine organisms from further damaging the piles. The Court refused the deduction saying that neither the piles nor the wharf was repaired. The work was not a repair unless it included some restoration of something that was lost or damaged. The work was an improvement not a repair and therefore was on capital account. The work added something: both the substance by which the piles were encased and the capacity of the submerged parts of the wharf to avoid further damage from the marine organisms.

This decision also favours classifying Year 2000 expenditure as on capital account. An item is repaired or maintained if it includes some restoration of something that was lost or damaged. Year 2000 expenditure does not restore something that was lost or damaged. Instead it is more like an improvement. Just as the piles of the wharf in *BP Oil* were protected from further damage, extending their expected life span, Year

2000 expenditure protects a computer software program from not functioning properly and extends its useful working life. But for the Year 2000 expenditure the program would only have worked until the year 2000 as designed, after the Year 2000 expenditure is incurred the program will continue for longer than designed.

There was a similar result in *Case 55* (1953) 4 CTBR (NS) 298 where after cyclone damage a building was moved back forty feet to avoid further damage. The taxpayer claimed the cost of moving as a deductible expense, but the Tax Board of Review found it was of a capital nature. The Board concluded that the cost of moving must be regarded as strengthening or preserving the business organisation or entity, the capital structure. This case appears similar to the incurring of Year 2000 expenditure. Year 2000 expenditure also involves preserving an asset from damage that may occur in the future. In the case of Year 2000 expenditure the damage would be the collapse or substantial reduction in performance of a taxpayer's computer systems. The expenditure is incurred to strengthen or preserve the business organisation or entity, or at least part of its capital structure.

In *Case 121* (1954) 4 CTBR (NS) 732 the taxpayer owned hotels which required rewiring as the existing systems had been condemned and required replacement. The taxpayer claimed the expenditure was deductible. The Tax Board of Review said the expenditure was of a capital nature and non-deductible. This was in spite of evidence that the new system did not improve the hotels or add to their value. The reasons were:

- The work done was more than restoration, it provided a lighting system having considerable advantages over the old, including cost advantages; and
- The work involved replacement of the old system and not a repair.

A similar result on similar facts occurred in *Case 39* (1958) 8 CTBR (NS) 189. These cases provide support for Year 2000 expenditure being capitalised. In both cases an external requirement meant that changes to the electric wiring system had to be made. In both cases the new system did not give rise to improved function, or even a more valuable asset. However, the work done was more than a mere repair. Although Year 2000 expenditure does not have the physical aspects of these cases, it shares a similar characteristic that it will often not improve the value of the existing software. However, because software which has been made Year 2000 compliant has considerable advantages over the old software, the principles of the cases can be applied. Again, as for some of the Canadian cases, there would seem to be more of an argument favouring deductibility in the Australian cases, compared to Year 2000 expenditure, yet the tribunals found the amounts were capital.

In *Case 49* (1971) 17 CTBR (NS) 319 the taxpayer had incurred expenses of approximately \$3,000 for repairs to a showroom ceiling. The Board of Review found that the expenditure on the new ceiling was of a capital nature because it overcame substantial defects of the old ceiling, thereby conferring substantial advantages on the asset. Again this case supports the view that Year 2000 expenditure should be on capital account. The alterations to the showroom conferred a substantial advantage on the showroom and overcame substantial defects of the old ceiling. In the same way

capital expenditure which corrects the Year 2000 bug confers substantial advantages on the computer software involved by overcoming a substantial defect.

Summary

The case law discussed above suggests that Year 2000 expenditure is not a deductible repair of an asset, but is a capital expense in relation to a computer program. The key factors from case law which favour the capital classification rather than a repair classification are:

- The expenditure will increase the anticipated working life of the computer program.
- The expenditure effects the removal of an inherent limitation from the program.
- The expenditure does not restore something lost or damaged but improves the program.

International accounting treatment of Year 2000 expenditure

United States

The Emerging Issues Taskforce (EITF) of the Financial Accounting Standards Board discussed the issue at a meeting on 18 July 1996. The issue discussed was how to account for the external and internal costs specifically associated with modifying internal-use computer software for the Year 2000. EITF Abstract 96-14 noted that:

The Taskforce reached a consensus that external and internal costs specifically associated with modifying internal-use software for the Year 2000 should be charged to expense as incurred.

United Kingdom

The Urgent Issues Taskforce (UITF) of the Accounting Standards Board in the UK issued Information Sheet No.19 on 7 November 1996. The information sheet said the following about the issue:

Concern has been expressed that many computer systems may require modification to the software in order to process correctly dates including the Year 2000 and subsequent years.

The UITF discussed the accounting for the cost of such modifications and concluded that they should be written off as incurred. It is not proposed to issue an Abstract on this topic.

Australia

The Urgent Issues Group of the Australian Accounting Research Federation has issued an Abstract on the topic. Abstract 12 deals with accounting for the costs of modifying computer software for the Year 2000. The Abstract deals only with the treatment of costs incurred to modify existing software and related systems used for internal purposes to overcome Year 2000 design faults. The consensus set out in the Abstract is that:

Costs relating to the modification of internal-use computer software for Year 2000 compatibility must be recognised as an expense in the period in which they are incurred.

The discussion of the consensus notes that this view reflects that the cost of modifying computer software does not give rise to an asset. The modification costs are incurred to maintain the software's existing service capacity (absent the Year 2000 design limitation), not to otherwise enhance the service capacity of the software beyond its existing condition or extend its useful life. This may be true in terms of the functions performed by the program, but it does not recognise the usefulness generated by the extended life of the program. In effect, by modifying an asset so that it operates beyond the date it would have ceased operating (or ceased operating to its desired level) there is a new asset created in a temporal sense.

Other

International Accounting Standard IAS-16 (“Property, Plant and Equipment”) states at paragraph 24:

Subsequent expenditure relating to an item of property, plant and equipment that has already been recognised should be added to the carrying amount of the asset when it is probable that future economic benefits, in excess of the originally assessed standard of performance of the existing asset, will flow to the enterprise. All other subsequent expenditure should be recognised as an expense in the period in which it is incurred.

Paragraph 25 of the Standard gives examples of improvements that give rise to increased future economic benefits. One of these is modification of an item of plant to extend its useful life. This would provide some support for the opposite view to those above, that Year 2000 expenditure should be capitalised.

New Zealand

To date the Institute of Chartered Accountants of New Zealand has not issued anything analogous to the Abstracts or Newsletters published by the established accounting bodies in the United States, the United Kingdom or Australia.

Summary

While accounting treatment is one of the factors to be looked at in classifying an amount as capital or revenue, accounting treatment is never conclusive of the tax treatment of transactions (see for example *CIR v Farmers Trading Co Ltd* (1982) 5 NZTC 61,321 (CA)). It is worth noting that there are different objectives for financial reporting and tax accounting and interpretation. As the Supreme Court of Canada said in *Canderel Limited v Canada* [1998] 1 SCR 147 at paragraph 36:

...financial accounting is usually concerned with providing a comparative picture of profit from year to year, and therefore strives for methodological consistency for the benefit of the audience for whom the financial statements are prepared: shareholders, investors, lenders, regulators, etc. Tax computation, on the other hand, is solely concerned with achieving an accurate picture of income for each individual taxation year for the benefit of the taxpayer and the tax collector....Therefore, while financial accounting may, as a matter of fact, constitute an accurate determinant of profit for some purposes, its application to the legal question of profit is inherently limited. Caution must be exercised when applying accounting principles to legal questions.

Indeed, financial reporting pronouncements may allow choices of methods, and be influenced by matters of practicality, matching and/or materiality, which in the absence of explicit statutory direction, are not generally matters that influence tax interpretation. Furthermore, the overseas accounting pronouncements do not exhibit a depth of reasoning of the type that would be influential in determining the appropriate characterisation in the income tax context.

The American reasoning appears to have been based on ease of accounting treatment. The United Kingdom’s pronouncement does not disclose the reasoning behind it. The Australians attempt to justify the position taken by reference to standard accounting

practice and the absence of an asset arising as a result of the expenditure, although as discussed there are some questions over this. IAS-16 is the only international accounting practice that would favour capitalising Year 2000 expenditure. Although the majority of the international accounting sources would expense Year 2000 expenditure, seemingly based on the absence of an asset as a result of the expenditure, the case law already discussed suggests capitalisation is appropriate.

Other revenue authorities' pronouncements

United Kingdom

The United Kingdom tax authority's position on the Year 2000 issue was set out in *Tax Bulletin* issue 35, April 1998. That bulletin confirmed the Inland Revenue view that the cost of a project to ensure millennium compliance will be treated as a revenue cost for tax purposes. The Bulletin stated:

Our view is that an in-house or contracted-out software project to ensure that existing systems can be adapted for the millennium will always be a revenue matter unless it is part of a major new project instituting other changes and the project is of a capital nature.

The Bulletin does not provide the type of conceptual or interpretative reasoning that would be of assistance for the Ruling.

United States

The Internal Revenue Service has issued announcement 97/50 which states that expenditure incurred in making systems Year 2000 compliant may be treated in accordance with Revenue Procedure 69-21. Revenue Procedure 69-21 allows taxpayers to treat the costs of developing software as either a deductible current expense or as capital expenditure amortisable over five years. Because of the similarities between expenditure incurred in making a system Year 2000 compliant and expenditure incurred in developing software under Revenue Procedure 69-21, announcement 97/50 is hardly surprising. However, it is not applicable to New Zealand because Revenue Procedure 69-21 is in conflict with the New Zealand legislative position that software is a capital asset that is depreciable, and that the development of software is on capital account.

Canada

Revenue Canada's position on Year 2000 expenditure was set out in *Income Tax Technical News*, # 12, 11 February 1998. In that item, Revenue Canada stated:

Whether a particular expenditure should be expensed or treated as a capital expenditure is a question of fact that is to be determined based on an appreciation of all the surrounding circumstances. To determine whether expenditures incurred to eliminate the millennium bug are of a capital or income nature, consideration should be given to determine whether the expenditure was made with a view to bringing into existence an asset or advantage of enduring benefit.

For instance, if a particular software program is only restored to its original condition so that it performs the same applications but the problems of the millennium bug have been eliminated, the expenditures incurred to eliminate the bug would normally be considered to be of a current nature.

However, any expenditure that would improve or enhance the software would usually be looked upon as being an account of capital.

The Canadian pronouncement does not discuss the key issue of whether the lifespan of software has been extended when the Year 2000 problem is removed. As such it is not considered to provide authoritative guidance for the Ruling.

Notwithstanding the conflicting conclusions of the overseas pronouncements when compared to the Ruling, none of the pronouncements from the United Kingdom, the United States, or Canada give extensive conceptual or interpretative reasoning as to the position taken. In these circumstances they are of limited assistance in interpreting the deductibility of Year 2000 expenditure in New Zealand.

Australia

The situation in Australia has been dealt with in a public ruling (Taxation Ruling TR 98/13). The ruling states that expenditure on initial diagnostic work is on revenue account, even if no further work is necessary. Expenditure on modifying and testing computer software is on revenue account even if it also provides minor improvements. Apportionment may be required when other upgrades are involved.

At the same time as a draft of the ruling was released, the Australian Budget provided that certain expenditure that would otherwise be on capital account would also be deductible up until 31 December 1999 (for example, a new software system).

Interestingly, the Australian ruling denies the applicability of repairs and maintenance cases to the Year 2000 expenditure issue. Instead, the ruling suggests that it is principles of general deductibility that determine the issue. At paragraph 35 of the ruling the focus is not so much on whether or not the expenditure gives rise to an enduring benefit, but on whether the expenditure enhances the asset itself so as to add to the structure of the business, or whether the expenditure is part of the day to day processes of the business in operating its assets. It considers the non-applicability of the enduring benefit test an important qualification, saying that it is inappropriate to apply an enduring benefit test to work done on computer software of a capital nature which by its nature does not suffer from wear and tear such that the work would always provide an enduring benefit.

At paragraph 36 of the ruling, it states that it is the character of the expenditure at the time it is incurred that is relevant. The expenditure is incurred to allow a system to continue functioning in the same way after the Year 2000 as it did before the Year 2000. The ruling says that this is not part of the business structure but is part of the day-to-day processes. Year 2000 expenditure is said to be no different to ongoing maintenance work on a system, which is on revenue account.

An exception to this general rule is stated in paragraph 38. It relates to a situation where the work done to make software Year 2000 compliant results in the original software being substantially rebuilt, and produces a different software system. In such cases, the expenditure will be on capital account, as it will be treated as being

incurred in acquiring a new software program. The written down value of the replaced software can be written off at the time of replacement.

The Budget announcements from the Australian Treasurer foreshadow legislation to extend the class of expenditure immediately deductible to also include expenditure on acquiring new software (including upgrades) or substantially rebuilding current software which has the predominant nature of ensuring Year 2000 compliance.

The conclusion that the enduring benefit test is not relevant to computer software is an important point. This means that the ruling accepts the view that Year 2000 expenditure does not increase the life expectancy of a computer software program. Given this, it follows that the ruling then finds that Year 2000 expenditure does not improve the software system or lead to a different software system. On this basis the conclusion that expenditure does not bolster business structure, but is simply part of the business process, also follows. For the reasons discussed above the Ruling and this commentary respectfully disagree with this view and the initial assumptions upon which it is based.

Inland Revenue materials

Public Information Bulletins

There have been two PIB items dealing with the conversion of business machinery as a result of the introduction of decimal currency and metric measurements. Such situations are analogous to the changes required as a result of the Year 2000 problem. It is relevant to consider the PIB items as they give an idea of the views taken by the Commissioner in the past.

In PIB No 28 (December 1965) the Commissioner set out the policy relating to machine conversion as a result of the introduction of decimal currency. There were three categories of office machines covered by the PIB. Category A included new cash registers, adding machines, and accounting machines installed on or after 1 January 1953, 1 January 1956, and 1 January 1959 respectively. These machines were converted at Government expense, and as there was no cost to the firm the item concluded that there was no tax allowance to the owner of the machinery.

Category B included cash registers, adding machines, and accounting machines installed new between 1 January 1948 and 31 December 1952, 1 January 1952 and 31 December 1955, and 1 January 1956 and 31 December 1958 respectively. For these machines the Government made a cash grant, based on the residual life of the machine, to meet replacement cost. The item concluded that if the machine was converted so as to be capable of dealing with decimal currency, the owner should deduct the compensation from the Departmental written-down value of the machine. The cost of conversion could either be claimed as a deduction in the year of conversion, or added to the adjusted written down value and depreciated at scale rates on the new value.

Category C machines were those machines which had reached the end of their normal useful life and for which there was no Government assistance. As for category B

machines, if the machine was converted the costs of conversion could be claimed either as a business expense or capitalised and depreciated.

The Commissioner also issued a PIB at the time businesses were converting to metric measurements. PIB 63 (September 1971) set out the tax treatment of the costs of converting machines to metric measurements. In the situation where a machine was converted, the cost was able to be claimed in the year of conversion or at the option of the taxpayer added to the book value of the machine and depreciated.

The treatment of costs incurred in the conversion of business machines for the introduction of decimal currency and metric measurements appears to allow deductibility as a concession. Further, the ability for such costs to be capitalised suggests that at the time there was a view that such expenditure might be of a capital nature. Support for this latter view comes from the Australian approach to the introduction of decimal currency and the metric system.

Sections 53F (decimal currency) and 53G (metric system) of the Income Tax Assessment Act 1936 (Aust) provided that amounts expended on converting plant to cope with the respective systems were allowable deductions to taxpayers. Each of the sections had a specific deeming provision that deemed the expenditure to not be expenditure of a capital nature. This legislative solution appears to demonstrate the uncertainty surrounding the appropriate classification of such expenditure, and appears to allow deductibility as a concession.

Tax Information Bulletins

The most relevant TIB item is the computer software policy statement in the Appendix to TIB Volume Four, No. 10 (May 1993). As with PIB items this item gives an idea of the views taken by the Commissioner in the past. The computer software policy statement provided a significant change to Inland Revenue's position. Before the policy statement, computer software was treated as a fully deductible expense. After the policy statement, taxpayers were required to capitalise software and depreciate it.

The computer software policy statement sets out the tax treatment of computer software in six different situations:

- Software purchases
- Specified leases of software
- Software developed in-house for use in business
- Commissioned software
- Software leases other than under a specified lease
- Software developed for sale or licence.

For the first four types of software, the policy statement consistently noted that maintenance costs may be deducted, while upgrade costs must be capitalised and depreciated. Page four of the policy statement set out the understanding of the Commissioner as to what was maintenance and what was an upgrade.

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:

- help desk facilities;
- fixing programme bugs;
- bringing performance up to the original specifications of the software;
- 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:

- adds new features to the software;
- increases its capacity or performance;
- extends the life of the software;
- provides a new version of the software that has more capacity or increased performance.

..

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.

There may be some debate as to whether Year 2000 costs are in relation to maintenance or an upgrade. It appears Year 2000 expenditure could be described as any of the following activities that were described as “maintenance” in the policy statement:

- Fixing program bugs;
- Bringing performance up to the original specifications of the software; and
- Making minor changes such as increasing field sizes.

However, the Year 2000 problem does not fit comfortably within these descriptions on further analysis. First, although the changes required in making a program Year 2000 compliant may be minor in terms of the actual recoding of the program, it is not accurate to say that they are minor in the context of the overall program. There may be a minor change to the code, but a major change to the continuing usefulness of the program.

Second, it is debatable whether Year 2000 changes bring the software’s performance up to its original specification. Year 2000 expenditure will not improve the functionality of software; it will simply enable it to continue at its current level of performance. It will extend the life of the program beyond its original design limit of

the year 2000, but this is not the same as bringing the performance up to its original specification.

Finally, it is questionable whether the Year 2000 problem would normally be described as a “program bug”. A program bug would normally be some part of the program that does not work according to the manner in which it was intended to work. The Year 2000 problem is instead a time restriction on the usefulness of software. While this may be a bug in a purchaser’s mind in the sense that the purchaser intended the program to continue beyond that date, it is not a bug in the sense that the program does not currently work according to specification.

The characteristics of an upgrade were described as:

- Adding new features to software
- Increasing the capacity or performance of software
- Extending the life of software
- Providing a new version of software that has more capacity or increased performance.

If only basic modifications of the program are taken to solve the Year 2000 problem, then neither the first nor the last of these characteristics will be involved. However, any Year 2000 expenditure that simply modifies the program will have the second and third characteristics.

The third characteristic is that an upgrade will extend the life of the software. Clearly the Year 2000 expenditure, to the extent that it is successful, will extend the life of software that would otherwise have crashed in the Year 2000, or would have ceased to operate at the desired level of performance. This is a characteristic of an upgrade.

In terms of the second characteristic, increasing capacity or performance, while solving the Year 2000 problem may increase performance in the sense that the program will last longer, a simple modification with no enhanced functionality will probably not increase capacity or performance.

Summary

The PIB items do not give clear guidance as to how to treat Year 2000 expenditure. They allow deductibility of machine conversion for external changes, apparently as a concession, but also provide for capitalisation. The computer software policy statement, while not conclusive as to whether costs related to Year 2000 expenditure should be deducted as maintenance or capitalised as an upgrade, provides more support for treating the expenditure as an upgrade and capitalising it.

Where non-compliant software is replaced, rather than amended to make it compliant, the computer software policy statement applies to the new software and treats it as being on capital account.

Conclusion

Overall, while the matter is not entirely free from doubt, the better view is that Year 2000 correcting and testing expenditure is expenditure of a capital nature. The primary reasons for the Commissioner taking this view are:

- The need or occasion giving rise to the expenditure is of an unusual and unique nature.
- In light of the fact that the Year 2000 problem is an inherent flaw in a program, the expenditure is for once and for all and gives rise to an enduring benefit, namely the prolonged existence of computer systems beyond the previous date limitation of the year 2000.
- The payments can be seen as reinforcing the business structure of the taxpayer.
- The cases on repairs and maintenance discussed above which, when applying the capital/revenue distinction in circumstances analogous to Year 2000 expenditure, find the expenditure to be capital in nature.

Such expenditure is properly to be capitalised and depreciated by the taxpayer, and the depreciation allowance will be an allowable deduction under section BD 2(1)(a) and subpart EG.

Comments on technical submissions received

There were seven key categories of comment in the submissions received in relation to this ruling. These categories all favoured a revenue classification of all Year 2000 expenditure:

1. The Year 2000 problem is not an inherent limitation but is a bug, like any other computer bug.
2. The Year 2000 expenditure needs to be broken down between different categories of expenditure as per the Commissioner's computer software policy statement.
3. Expenditure on the Year 2000 problem is a normal business occurrence.
4. Application of the tests from *BP Australia* supports a revenue classification.
5. Year 2000 expenditure does not give rise to any improvement, but just restores the function of the software.
6. The repairs and maintenance cases favour a deduction for Year 2000 expenditure.
7. Consistency with overseas revenue authority and overseas accounting pronouncements favours a revenue classification.

Point 1 above has been dealt with in this commentary under the heading *Classification of Year 2000 problem*. It is not accepted that the Year 2000 problem is a “bug” in the sense suggested.

Point 2 has been noted as having merit, and the Ruling and this commentary do deal with different categories of expenditure relating to the Year 2000 problem.

Point 3 has been dealt with in the discussion of the first test from *BP Australia*. It is not accepted that the Year 2000 problem is a normal business occurrence.

Point 4 has been considered, but for the reasons set out above the Ruling and this commentary still conclude that the tests in *BP Australia* favour a capital classification for Year 2000 correcting and testing expenditure.

Point 5 is very much linked to the first, and for the reasons set out therein the submission has not been accepted.

Point 6 has also been considered, but again the Ruling and this commentary still conclude that the cases discussed, to the extent they are applicable to an intangible like computer software, favour a capital classification.

Point 7 regarding consistency with overseas pronouncements is addressed in this commentary. For the reasons given when dealing with international accounting treatment and overseas revenue authorities' pronouncements, the desire for consistency between the Ruling and these sources of guidance is a policy issue, and does not bear upon the interpretational conclusions of the Ruling and this commentary.

As well as these categories of comment a number of other submissions are worth noting.

One submission has suggested that for some computer software the arrival of the year 2000 will not be so fundamental in nature as suggested in the Ruling and this commentary, but may only mean there are a few minor flaws with the program. There was even a suggestion that these flaws may be such that the taxpayer in question is not concerned enough to incur expenditure to remedy them. In the event that the taxpayer does not incur expenditure in correcting the software, the Ruling will not apply to such taxpayers as they will not have Year 2000 expenditure. However, where such taxpayers do decide to correct the software (because the flaw, though minor, is annoying), the Arrangement to which the Ruling applies does cover that taxpayer as it will be the case that the software could not correctly perform its functions in respect of dates after 31 December 1999. Even where only one function is affected, the expenditure incurred will be improving the program in respect of that function.

Another submission suggested that given the short economic life of computer software, and the increasing trend to early obsolescence, Year 2000 expenditure does not really extend the useful life of the software. While some software may have a short economic life, other software does not (which is in some way a reason for the Year 2000 problem). Irrespective of the economic life of a program, software is treated by the Act as a capital asset. As Year 2000 expenditure enhances the life of a capital asset, and is an improvement, it is on capital account whether or not that increase in life is just a few years or a considerably longer time.

Some submissions have expressed the view that it is not possible to treat all taxpayers the same in respect of Year 2000 expenditure (excluding here taxpayers who hold software as trading stock). Such submissions suggested that each taxpayer needs to be treated on a case by case basis. It is considered that when determining the classification of Year 2000 expenditure there are sufficient common factors between taxpayers that the case-by-case variations are not so significant as to prevent a generic application of the conceptual principles set out in the Ruling and this commentary.