

Course: Professional Issues in IT

Course Instructor: Shaharbano

Email address: shahar.bano@nu.edu.pk

Software Contracts and Liability

What is a contract?

A contract is simply an agreement between two or more persons (the *parties* to the contract) that can be enforced in a court of law. The parties involved may be legal persons or natural persons.

Essentials for a contract

The most important and essential concerns of a contract are that:

- ▶ all the parties must intend to make a contract;
- ▶ all the parties must be competent to make a contract, that is, they must be old enough and of sufficiently sound mind to understand what they are doing;
- ▶ there must be a 'consideration', that is, each party must be receiving something and providing something.

FIXED PRICE CONTRACTS FOR BESPOKE SYSTEMS

- ▶ The first type of contract we shall consider is the type that is used when an organization is buying a system configured specifically to meet its needs. Such systems are known as *tailor-made* or *bespoke* systems.
- ▶ A bespoke system may consist of a single PC equipped with a word processor, a spreadsheet, and a set of macros adapted to the customer's needs or it may consist of several thousand PCs spread across 50 offices in different parts of the world, connected by a wide-area network, with large database servers and a million lines of specially written software.

Bespoke system

The contract for the supply of a bespoke system consists of three parts:

- ▶ A short *agreement*, which is signed by the parties to the contract: This states who the parties are and, very importantly, says that anything that may have been said or written before does not form part of the contract.
- ▶ The *standard terms and conditions*, which are normally those under which the supplier does business; and
- ▶ A set of *schedules* or *annexes*, which specify the particular requirements of this contract, including what is to be supplied, when it is to be supplied, what payments are to be made and when, and so on.

Issues in contract

- ▶ What is to be produced
- ▶ What is to be delivered
- ▶ Ownership of rights
- ▶ Confidentiality
- ▶ Payment terms
- ▶ Penalty clauses
- ▶ Obligations of the client
- ▶ Standards and methods of working

What is to be produced

- ▶ It is clearly necessary that the contract states what is to be produced.
- ▶ requirements specification

It is important that the reference to the requirements specification identifies that document uniquely; normally this will mean quoting a date and issue number.

Problem: Any changes needed during the contract life

What is to be delivered

The following is a non-exhaustive list of possibilities:

- ▶ source code;
- ▶ command files for building the executable code from the source and for installing it;
- ▶ documentation of the design and of the code;
- ▶ reference manuals, training manuals and operations manuals;
- ▶ software tools to help maintain the code;
- ▶ user training;
- ▶ training for the client's maintenance staff;
- ▶ test data and test results.

Ownership of rights

It is important that the contract should also state just what legal rights are being passed by the software house to the client under the contract.

Ownership in physical items such as books, documents or disks will usually pass from the software house to the client, but other intangible rights, known as intellectual property rights, present more problems.

Confidentiality

- ▶ when a major bespoke software system is being developed, the two parties will acquire confidential information about each other.
- ▶ Non of the parties would like the other to disclose its secrets.
- ▶ It is usual in these circumstances for each party to promise to maintain the confidentiality of the other's secrets, and for express terms to that effect to be included in the contract.

Payment terms

a pattern of payments such as the following must be included:

- ▶ an initial payment of, say, 15 per cent of the contract value becomes due
- ▶ on signature of the contract;
- ▶ further stage payments become due at various points during the development,
- ▶ bringing the total up to, say, 65 per cent;
- ▶ a further 25 per cent becomes due on acceptance of the software;
- ▶ the final 10 per cent becomes due at the end of the warranty period.

Calculating payments for delays and changes

- ▶ Both sides of the parties may create little or high loss regarding unable of meeting the timeline. Thus extra work has to be indulged producing extra payments
- ▶ The contract must specify the process by which these extra payments are to be calculated.

Penalty clauses

The previous subsection dealt with compensation for delays caused by the client; delays caused by the supplier are handled differently.

Delays in delivering working software are notoriously common; it might therefore be expected that contracts for the supply of software would normally include such a penalty clause. There are three reasons for this:

- ▶ Suppliers are very reluctant to accept penalty clauses and anything stronger than the example quoted above is likely to lead to reputable suppliers refusing to bid.
- ▶ If the contract is to include penalty clauses, the bid price is likely to be increased by at least half the maximum value of the penalty.
- ▶ If the software is seriously late and penalties approach their maximum, there is little incentive for the supplier to complete the work since they will already have received in stage payments as much as they are going to get.

Standards and methods of working

The supplier is likely to have company standards, methods of working, quality assurance procedures, and so on, and will normally prefer to use these. More sophisticated clients will have their own procedures and may require that these be adhered to. In some cases, the supplier may be required to allow the client to apply quality control procedures to the project.

The contract must specify which is to apply.

Project meeting

Regular progress meetings are essential to the successful completion of a fixed price contract and it is advisable that standard terms and conditions require them to be held. The minutes of progress meetings, duly approved and signed, should have contractual significance in that they constitute evidence that milestones have been reached (so that stage payments become due) and that delay payments have been agreed.

Project managers

Each party needs to know who, of the other party's staff, has day-to-day responsibility for the work and what the limits of that person's authority are. The standard terms and conditions should therefore require each party to nominate, in writing, a project manager. The project managers must have at least the authority necessary to fulfil the obligations that the contract places on them. It is particularly important that the limits of their financial authority are explicitly stated, that is, the extent to which they can authorize changes to the cost of the contract.

Acceptance procedures

Acceptance procedures are a critical part of any fixed price contract for they provide the criteria by which successful completion of the contract is judged.

The essence of the acceptance procedure is that the client should provide a fixed set of acceptance tests and expected results and that successful performance of these tests shall constitute acceptance of the system.

The tests must be provided at or before the start of the acceptance procedure; within

reason, there may be as many tests as the client wishes, but extra tests cannot

be added once the test set has been handed over. The purpose of this restriction is to ensure that the acceptance procedure can be completed in reasonable time.

Other points to be addressed under this heading include who shall be present when the tests are carried out and what happens if the tests are not

Warranty and maintenance

Once the product has been accepted, it is common practice to offer a warranty period of, typically, 90 days. Any errors found in the software and reported

within this period will be corrected free of charge. This clause is, of course, subject to negotiation; reducing or eliminating the warranty period will reduce the overall cost of the contract and prolonging the period will increase it.

Once the warranty period is over, the supplier may offer, or the client

demand, that maintenance will continue to be available on request.

Since

such maintenance is likely to involve enhancement of the software rather

than simply correction of faults, the resources required are unpredictable –

the client almost certainly does not know what enhancements will be

required in two years' time. For this reason, a fixed price for the maintenance

Inflation

In lengthy projects or projects where there is a commitment to long-term maintenance, the supplier will wish to ensure protection against the effects of unpredictable inflation. To handle this problem, it is customary to include a clause which allows charges to be increased in accordance with the rise in costs.

The clause should state how often (once a year, twice a year) charges can be increased and how the effect on the overall price is to be calculated.

Indemnity

It could happen that, as a result of the client's instructions, the supplier is led unwittingly to infringe the intellectual property rights of a third party or that, through carelessness or dishonesty, the supplier provides a system which infringes such rights - perhaps through using proprietary software as a component of the system delivered. For this reason, it is advisable to include a clause under which each party indemnifies the other (that is, guarantees to cover any costs the other party becomes subject to) for liability arising from its own faults in this respect.

Termination of contract

There are many reasons why it may become necessary to terminate a contract before it has been completed. It is not uncommon, for example, for the client to be taken over by another company that already has a system of the type being developed, or for a change in policy on the part of the client to mean that the system is no longer relevant to its needs. It is essential, therefore, that the contract make provision for terminating the work in an amicable manner. This usually means that the supplier is to be paid for all the work carried out up to the point where the contract is terminated, together with some compensation for the time needed to redeploy staff on other revenue earning work. The question of ownership of the work so far carried out must also be addressed.

Arbitration

An arbitration clause will usually state that, if arbitration is required, it will take place in accordance with the Arbitration Act 1996. This Act of Parliament lays down a set of rules for arbitration that cover many eventualities, and reference to it avoids the need to spell these out in detail; most of the provisions of the Act are optional, in the sense that they come into effect only if the contract contains no alternative provision.

Applicable law

Where the supplier and the client have their registered offices in different legal jurisdictions or performance of the contract involves more than one jurisdiction, it is necessary to state under which laws the contract is to be interpreted.

CONSULTANCY AND CONTRACT HIRE

Consultancy

- ▶ End product of a consultancy project is usually a report or other document.
- ▶ Under normal circumstances a fee for IT consulting is measured on a per day, per consultant basis.
- ▶ Fixed fee IT consulting contract applies to projects which are well defined.
- ▶ Open ended consultancy models generally favour the consulting firm, as the consultancy firm is rewarded on a per day basis, there is no incentive to complete assignments within a fixed time. The result often being risk of project and cost overrun.
- ▶ Contract is very simple.

Contract hire

- ▶ Supplier's responsibility is limited to providing suitably competent people and replacing them if they become unavailable.
- ▶ The staff work under the direction of the client.
- ▶ Payment is on the basis of a fixed rate for each day worked.
- ▶ Ownership of intellectual property rights generated in the course of the work may be needed to be addressed.

There are four important aspects of a consultancy contract:

Confidentiality: Consultants are often in a position to learn a lot about the companies for which they carry out assignments and may well be in a position to misuse this information for their own profit.

Terms of reference: It is important that the contract refers explicitly to the terms of reference of the consultancy team and, in practice, these are perhaps the commonest source of disagreements in consultancy projects. As a result of their initial investigations, the consultants may discover that they need to consider matters that were outside their original terms of reference but the client may be unwilling to let this happen, for any one of a number of possible reasons;

Liability: Most consultants will wish to limit their liability for any loss that the customer suffers as a result of following their advice. Customers may not be happy to accept this and, in some cases, may insist on verifying that the consultant has adequate professional liability insurance.

Who has control over the final version of the report: It is common practice for the contract to require that a draft version of the final report be presented to the client. The client is given a fixed period to review the report and, possibly, ask for changes. The revised version that is then submitted by the consultant should be the final version.

Time and Materials

A time and materials contract (often referred to as a 'cost plus' contract) is somewhere between a contract hire agreement and a fixed price contract. The supplier agrees to undertake the development of the software in much the same way as in a fixed price contract, but payment is made on the basis of the costs incurred, with labour charged in the same way as for contract hire. The supplier is not committed to completing the work for a fixed price, although a maximum payment may be fixed beyond which the project may be reviewed.

OUTSOURCING

Outsourcing, sometimes known as facilities management, is the commercial arrangement under which a company or organization (the customer) hands over the planning, management and operation of certain functions to another organization (the supplier).

IT outsourcing contracts are inherently complex and depend very much on individual circumstances. It is not appropriate to go into detail here about such contracts but the following is a list of just some of the points that need to be addressed:

Key points of outsourcing

- ▶ how is performance to be monitored and managed;
- ▶ what happens if performance is unsatisfactory;
- ▶ which assets are being transferred;
- ▶ staff transfers;
- ▶ audit rights;
- ▶ contingency planning and disaster recovery;
- ▶ intellectual property rights in software developed during the contract;
- ▶ duration of the agreement and termination provisions.

HEALTH AND SAFETY

The ones that are of particular concern to software engineers are:

- ▶ provision and maintenance of safe plant;
- ▶ provision and maintenance of safe systems of work;
- ▶ provision of such information, instruction, training, and supervision as necessary;
- ▶ ensuring the workplace is maintained in a safe condition;
- ▶ provision and maintenance of a safe working environment and adequate welfare arrangements.

The Act also requires employers to ensure that their activities do not expose the general public to risks to their health and safety. Manufacturers of equipment to be used at work also have a responsibility to ensure that it is safe.

Failure to comply with the Health and Safety at Work Act is a criminal offence and, in serious cases, can lead to criminal proceedings being taken against individuals.