

Contracts

1 Contracts

- “One of the hallmarks of a free society is the autonomy it affords its members to reach the goals of their choice, provided they do not harm others.”
 - Contracts: a formal way to ensure that “others are not harmed”

2 Outline

- Understand the purpose of contracts
 - What should go in contracts for software?
- Know the different types of contractual agreement
- Be familiar with the main issues that contracts address
- Understand the different types of liability for defective software

3 What is a contract

- An *agreement* between two or more *parties* (legal / natural persons) that can be enforced in a court of law
- All the parties must intend to make the contract
- All the parties must be competent to make the contract:
 - old enough
 - sufficiently sound mind to understand what they are doing
- There must be a (objectively determined) “consideration”, i.e. all parties must be:
 - receiving something
 - providing something

4 Contracts in the UK

- Contract law regulates every transaction:
 - from buying a tube ticket
 - to computerized derivatives trading
- Breach of a contract:
 - failure to perform the obligations defined in a contract
 - court can award compensation for damages

5 Contracts in the UK

- Mostly based on the Common Law
 - i.e. based on past court decisions (precedence)
- Contract law in the UK: a long history
 - “well adapted to effectively handle disputes that arise in fulfilling commercial agreements” [2]
 - Perfectly adequate legislation for traditional transactions
 - * e.g. supply of goods or computers

6 Contracts in the UK

- New technologies came recently into the market:
 - internet
 - e-commerce
- Need for new regulations about new issues, as:
 - electronic signatures (<http://www.legislation.gov.uk/ukpga/2000/7/section/7>),
 - which country's law governs international transactions,
 - ...
- In this lecture, we focus on:
 - differentiating between different kinds of contracts
 - for providing software / services
 - liability issues when software fails

7 Fixed Price Contracts

- Used when a company buys a *tailor made* system (or *bespoke system*), i.e.
 - a specially designed system that fits its needs
 - * just a single PC, or
 - * thousands of PCs in several cities

8 Fixed Price Contracts - components

- Consists of:
 - A short agreement
 - * Signed by the parties of the contract
 - * Clearly states that anything said before is not binding
- Contracts for small-scale development projects:
 - may be much simpler
 - often only exchange of letters

9 Fixed Price Contracts - components

- The standard terms and conditions
 - Normal terms under which the *supplier* does business
- A set of schedules state explicitly
 - for suppliers: *what* and *when* items are to be supplied
 - for customer: *when* payments are to be made
- Annex
 - states precisely *what* is to be provided
 - * source code / documentation / user training / software tools ...
 - additional stipulations
 - * refers to the requirements specification (separate document)

10 Fixed Price Contracts - delivery

- Software delivery is not simply delivering the source code which does what is required.
- Important: contract should state a list of deliverables:
 - Source code
 - Command file for building or executing code
 - Design documentation
 - Reference manual, training manual, operating command etc.
 - Software tool to help main the code
 - User training
 - Training for client's maintenance
 - Test data and test results
 - etc.

11 Fixed Price Contracts - ownership of rights

- Ownership of rights:
 - specifies what legal rights are passed by the software company to the client
- Physical ownership:
 - books / documents / computers / discs usually pass to the client
- Software:
 - potentially protected by Intellectual Property Rights
 - * copyright / design rights / trademarks / patents
- Very important:
 - explicitly state in the contract who has the rights

12 Fixed Price Contracts

- Example: <http://www.coactivate.org/projects/agile-contracts/sample-fixed-price-agile-contract>

13 Confidentiality

- During the design of a tailor made system:
 - both parties gain confidential information for the other party
- Obligation of confidence
 - Clause in a contract
 - Separate non-disclosure agreements
 - Subject to Intellectual Property law
- Example:
- http://www.wyetec.co.uk/PDFs/WyeTec_NDA_website_2012.pdf

14 Payments and Penalties

- Specified by the standard terms and conditions:
 - periods to pay
 - surcharge on overdue payments
- For instance:
 - “Payment shall become due within thirty days of the date of issue of an invoice. If payment is delayed by more than 30 days from the due date, the Company shall have the right, at its discretion, to terminate the contract or to apply a surcharge at an interest rate of 2% above the bank base lending rate”
- In practice, such clauses are brought into effect only in extreme cases
 - may destroy the goodwill between the two parties

15 Payments and Penalties

- Usually payment is done in phases
 - it reduces the financial risk of the supplier against
 - * insolvency of the client
 - * any other cash flow difficulties
- Annex:
 - Payment tied to milestones, e.g.
 - * on signature of the contract
 - * at various points during the development
 - * on acceptance of software
 - * at the end of the warranty period
 - Payment for delays and penalties
 - * client / supplier not fulfilling their obligations

16 Acceptance procedure

- Critical stage of the fixed price contracts
 - Provide the criteria for successful software completion
 - Client should provide fixed acceptance test and accepted result
 - Test set must be provided at or before acceptance procedure
 - Extra tests cannot be added once test set has been delivered
 - * To complete acceptance procedure in reasonable time

17 Indemnity

- Supplier is led, unwittingly, to infringe IP of third party
 - Using proprietary software
 - Which party indemnifies the other for liability?

18 Termination of a contract

- Many reasons to terminate a contract:
 - client chooses another company that covers his/her needs
 - client does not need the services of the supplier anymore
- The contract must specify:
 - payment to the point of completed work
 - costs of redeploying staff
 - ownership of work products
- Both parties may accept in the contract that:
 - in the case of conflict (dispute), they will accept the decision of an independent arbitrator (e.g. from the BCS)
- Arbitration Act 1996 <http://www.legislation.gov.uk/ukpga/1996/23/contents>

19 Arbitration

- Going to court can be very expensive
- Mainly law firms benefit from it
- Contract should contain a clause the parties agree to accept an independent arbitrator's decision
 - The president of the BCS or the president of IEE
- If arbitration is required it will take place in accordance with the Arbitration Act 1996
- The Act of parliament defined the set of rules for arbitration that cover many eventualities

20 Contract Hire

- Supplier agrees to provide to a customer some staff with specific skills for an agreed rate
- Payment is set at a fixed daily / hourly rate:
 - based on skills and experience of staff
 - terminated by either party at short notice (e.g. 1 week)
- Supplier is only responsible to:
 - provide competent staff
 - replace missing / unsuitable staff quickly
- Sometimes called "body shopping"
- Ownership of IP must be addressed.

21 Consultancy

- A version of a contract hire
 - much simpler contract
- Consultants are experts hired to:
 - assess some aspect of an organisation
 - propose solutions to problems
- Fixed-price, usually small amount.
- A report is delivered as the final product. Success measure is harder than products delivered in fixed-price contracts

22 Consultancy - main components

- Confidentiality agreement
- Terms of reference
 - Important to refer to it to solve disagreements.
- Liability
- Control over the final version of the report
- Usually no early termination of the contract:
 - end product is usually a report
 - difficult to prove that the services are not good

23 Outsourcing

- Handing over specific company functions to another specialized company, e.g.
 - electricity providers / planning / management / operation . . .
 - 25 years ago, UK outsourced IT services
- Contracts can be complex:
 - how is performance to be monitored / judged
 - * what if not satisfactory
 - rates and duration
 - intellectual property rights
 - transferring / removing own staff, previously doing this job
 - contingency planning / disaster recovery
 - Service level agreement - related to performance monitoring

24 Licence agreements

- Customers buy copies of software
- There may be many different agreements
 - To use one copy
 - Run software on server, limiting the maximum number of users
 - Use unlimited number of copies
- Vendors concern:
 - Not giving away its own rights
 - Limiting customers' use of the software
 - Regular income from support activities
 - Not liable for any defects

25 Liability for defective software

- Software suppliers always try to limit their contractual commitment for quality
- In most contracts, their liability is limited to:
 - the purchase price, or
 - some fixed amount
- Unfair Contract Terms Act (1977) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/284426/oft311.pdf:
 - sets some minimum limits of the liability of suppliers
 - no limit if product defect causes death or injury
 - * important for safety-critical software
- Courts may judge liability issues case-specifically:
- St. Albans City vs. International Computers Ltd. https://en.wikipedia.org/wiki/St_Albens_District_Council_v_International_Computers_Ltd

26 You should be able to:

- Describe / discuss (with references) the main issues of contracts in software engineering, e.g.:
 - fixed price contracts
 - contract hire
 - consultancy
 - outsourcing
 - liability for defective software