

2. In the first action ("the '882 action") Nova complains of a coin operated video game called Jackpot Pool. This game was created by the first defendant ("Mazooma") which supplied the software to the second defendant ("Games Network"). Games Network copied the software and supplied it to the third defendant ("Gamestec"). Gamestec operates a coin operated terminal called the Gamesnet terminal and has installed Jackpot Pool on that terminal. Mazooma also supplied the Jackpot Pool software to the fourth defendant ("Inspired"). Inspired copied the software and supplied it to the fifth defendant ("Leisure Link"). Leisure Link manufactures and operates a coin operated game terminal known as the IT Box and has installed Jackpot Pool on that terminal. The proceedings against the second to fifth defendants inclusive in the '882 action have been stayed on terms that they will be bound by the outcome of the action as between Nova and Mazooma.
3. In the second action (the '084 action) Nova complain of a coin operated video game called Trick Shot. The defendant ("Bell-Fruit") has manufactured machines incorporating the game and has operated those machines in the United Kingdom.

Background

4. The market for video games is essentially split into two sectors, the play at home market and the coin operated market. This action is concerned with the latter. Access to home video games is generally obtained in one of two ways. Games may be bought as cartridges which are then used in conjunction with a games module such as a "Sony Playstation" or as computer disks which may be run on a personal computer. In addition, and more recently, the growth of the internet has led many companies to develop games which may be downloaded to a personal computer. Such games are usually controlled by the use of a keyboard and this is generally considered to be less satisfactory than the use of a dedicated games module.
5. Coin operated games come in three main varieties. The first is the traditional fruit machine game known in the trade as an amusement with prizes ("AWP") game. The second is a skill based game known as a skill with prizes ("SWP") game. Finally, there is the video arcade style game which is provided for amusement only and does not pay out prizes. Machines which offer prizes are regulated by the Gaming Act 1968. In the case of AWP games the Gaming Act restricts the maximum stake that a player may place and also the maximum jackpot which may be won. Operators of AWP's are required to pay amusement machine licence duty ("AMLD") in respect of each machine that is sited. Trick Shot is an AWP game.
6. In contrast to AWP games, SWP games require the player to exercise an element of skill to secure the payout of a prize. The Gaming Act imposes no restriction on the maximum stake or prize in relation to such games. If, however, the stake is £1 or higher then AMLD is payable. Pocket Money and Jackpot Pool are both SWP games.
7. SWP games were first introduced in the 1980s and generally had a question and answer format. Such games presented the player with a question and multiple choice answers from which the player had to select the correct one by pressing a button next to the

screen. By successfully answering a number of questions the player could win a cash prize. This type of machine became popular in the mid 1980s and it continues to be successful although, to some extent, its popularity has declined over recent years. For this reason developers of SWP games have sought to develop alternative formats.

8. SWP machines are purchased by a considerable number of different businesses but two of the largest operators are Gamestec and Leisure Link. They claim to control more than 40% of the market between them.
9. SWP games, like AWP games, were originally freestanding; that is to say, they were each housed in a separate machine. In about 2000, however, a significant further development occurred. Manufacturers began to develop multi game video terminals and placed them in traditional locations for AWP and SWP machines such as pubs, arcades and betting shops. These machines have a video screen and are based around personal computer technology. The customer uses the touch screen to select a game and to control the play. The benefit of such machines is that they are linked back to the operator's base. This allows the operator to download new games to the terminal and so change the games which the customer can play. Any one terminal may have a number of different games available to be played on it. If a game is successful it is retained. If it is not then it is replaced by another. The Gamesnet terminal developed by Gamestec and the IT Box terminal developed by Leisure Link are two such multi game video terminals. The versatility of these machines has gradually reduced the demand for the traditional stand alone SWP and AWP machines.

Nova and the development and launch of Pocket Money

10. Nova was established in 1990 and is engaged in the design, manufacture and sale of gaming machines. It has two directors and principal shareholders, Mr Peter Robinson and Mr David Jones. Both gave evidence before me. Mr Jones is primarily responsible for designing games sold by Nova and Mr Robinson is primarily responsible for the commercial and administrative aspects of the business. As I will elaborate later in this judgment Mr Carr QC, who appeared on behalf of the defendants, has mounted a substantial attack on the credibility of Mr Jones and Mr Robinson. The matters to which I refer in this part of my judgment are not, however, controversial.
11. Mr Jones met Mr Robinson in about 1974 while working for a company called Music Hire Group Limited. This company operated fruit machines, juke boxes, pool tables and video games, mainly in public houses. Mr Robinson and Mr Jones developed together an interest in the video games that they had to maintain. They began to conceive the idea of making their own video games that would be of better quality, more reliable and easier to maintain. In 1979 they left Music Hire Group Limited and set up their own company called Century Electronics. After a considerable degree of effort they devised a coin operated system known as CVS. This sold well in the United Kingdom and the USA and Century Electronics shipped some machines to Japan. In 1983, however, the business rapidly declined and was forced into liquidation.

12. From 1983 until 1989 Mr Robinson and Mr Jones worked in the USA on the design of various different products. In 1989 they returned to the United Kingdom and set up Nova. Through the 1990's Mr Jones and Mr Robinson produced various games until, in 1999, Mr Jones had the idea of creating an SWP game that rewarded the player's hand-eye co-ordination, rather than his ability to answer questions. Following this idea the first game they developed was called Pharaoh's Gold. This required the player to exercise a measure of skill in firing an arrow at a target. It was one of the best selling SWP machines in the United Kingdom. As a result of the success of this game Mr Robinson and Mr Jones decided to create a further game based upon hand-eye co-ordination with a cash prize. This led to the development of Pocket Money.
13. Mr Jones explained to me that he designed the graphics and features of the game and wrote the software for it. Mr Carr mounted a substantial attack on Mr Jones and, in particular, the extent to which, in carrying out this work, he derived ideas from other sources and was assisted by other persons. I return to this issue later in this judgment. Those challenges do not, however, impinge upon the nature of the process that Mr Jones undertook and which I describe in the following paragraphs.
14. Mr Jones produced various design notes for Pocket Money during 2001. When preparing these notes Mr Jones considered a game called Video 8 Ball which was a successful pool game that Century Electronics produced and sold in 1981. This was a one or two player pool simulation game with a two dimensional table, six pockets, seven balls and a cue ball. Points were awarded if the balls were potted. The cue ball was aimed by means of a cross hair target which could be placed anywhere on the table using a joystick.
15. The design notes which Mr Jones prepared are annexed to the particulars of claim. These collectively comprise one of the literary works upon which reliance is placed in these proceedings. I will return to consider them in detail when I address the issue of infringement. Suffice to say for present purposes that I accept the evidence of Mr Jones that, in so far as they disclose ideas which were incorporated into the game, they were produced before the relevant software was written.
16. Mr Jones did his programming work in Visual Basic. In writing the game he switched between writing aspects of the program and producing the graphics in the form of bitmap files. In order to create the bitmaps he used software called Adobe Photoshop.
17. Pocket Money was completed by mid 2001. The first prototype of this machine was installed in an arcade in Manchester in late August. The game proved to be very popular and Nova decided to proceed into production. It exhibited the game at the United Kingdom annual trade fair, the Amusement Trade Exhibition International ("ATEI") show, in London in January 2002 and in that month took orders in excess of £600,000. Over the next five months Nova received orders in excess of £1.4 million. Nova had another success on its hands.
18. Later in 2002 Nova also launched a self standing multi game machine called Play Pool. This contained three games: Pocket Money, Play Pool Tournament and Hot Shot Pool. This machine was networked to Nova's offices where the highest scores were logged and,

after a certain period of time, a large prize awarded to the player who had achieved the highest score.

Nova's dealings with the defendants

19. The relationship between the defendants and the history of dealings that took place with Nova are somewhat complex but I must explain them in outline because they form part of the backdrop against which it is contended on behalf of Nova that the allegation of copying must be considered. I heard a good deal of evidence directed to this subject.
20. The defendants to the '882 action really fall into two groups. Mazooma, Games Network and Gamestec are all part of the Danoptra group of companies. Mazooma is a games designer and provides software to Games Network. Games Network downloads the software to the Gamesnet terminals provided and operated by Gamestec. Bell-Fruit is also a member of the Danoptra group of companies although, prior to December 2004, it was part-owned by a European coin machine company called Gausseman. Bell-Fruit is a major designer and manufacturer of AWP machines. It also engages in the design and manufacture of some SWP games and is the manufacturer of the Gamesnet terminals.
21. Inspired and Leisure Link are members of the Leisure Link group of companies. Leisure Link is a provider and operator of IT Box terminals to end user locations. Inspired is responsible for downloading software to those IT Box terminals. That software may be provided by another company within the Leisure Link group or, as in the case of Jackpot Pool, it may be bought in from an outside designer such as Mazooma.

Games Network and Gamestec

22. From about April 2002, Games Network and Gamestec had dealings with Nova which I may summarise as follows. By April 2002 Nova had sold approximately 50 self standing Pocket Money machines to Gamestec. Mr Nielson, the Managing Director of RLMS Sales Limited, another company in the Danoptra group and who gave evidence on behalf of Gamestec and Games Network, explained that he recognised Pocket Money was a very successful game but also considered that, by May 2002, the dedicated SWP market was in commercial decline. This was for several reasons. First, the price of a single dedicated machine was relatively high. Second, single stand alone dedicated SWP machines had to be moved frequently to ensure that customers did not grow bored playing the same games. Third, the number of sites that could justify dedicated SWP machines was relatively low. For all these reasons Gamestec had decided at that time that its future lay in multi game downloadable terminals and had already installed around 3,500 Gamesnet terminals at end user locations.
23. Although Mr Nielson was not interested in acquiring many dedicated Pocket Money machines he was interested in exploring the possibility of adapting the Pocket Money game so that it could be used on the Gamesnet terminals. For that reason he arranged a meeting with Mr Robinson in May 2002. Mr Nielson accepted that he would have told Mr Robinson at that meeting that he recognised Pocket Money was a very successful game. Mr Nielson found, however, that his enthusiasm to adapt Pocket Money was not

apparently shared by Mr Robinson and although, in May 2002, Nova entered into a confidentiality agreement with Gamestec pursuant to which Games Network supplied a specification for the Gamesnet terminal to Nova, the matter was not advanced further during the course of 2002.

24. In September 2002, Nova attended the American Music and Machine Operators ("AMOA") trade exhibition in Las Vegas. At this exhibition Nova exhibited Play Pool containing the three different games, Pocket Money, Play Pool Tournament and Hot Shot Pool. Mr Robinson saw Mr Richard Wilson, the Managing Director of Mazooma and Mr Austin, the Managing Director of Bell-Fruit, playing the Pocket Money game. Mr Robinson recalls approaching them and asking them what they thought of the game. He believes that Mr Wilson replied "I am just looking at how I can get around your patents". Mr Wilson, who gave evidence before me, had already seen Pocket Money at the ATEI show in January 2002 and does not believe he would have made any such comment. I accept that it is likely that some 'off the cuff' comment was made by Mr Wilson to Mr Robinson but, having heard the evidence of both witnesses, do not accept that it represented any threat by Mr Wilson that he was setting about copying the Pocket Money game.
25. Thereafter I may summarise events very briefly. First, and following the exhibition, Gamestec did have a particular interest in an aspect of the computer technology incorporated in the Play Pool machine called the USB fingerprint module. This provided a way of keeping track of individual players for scoring purposes. Accordingly, Gamestec requested a copy of the USB fingerprint module to see how the technology actually worked. It became apparent, however, that it was not suitable for Gamestec's purposes and therefore was not progressed further.
26. In January 2003, Mr Robinson met Mr Nielson at the ATEI show in London. They discussed Pocket Money and the fact that Gamestec had ordered a further 40 Play Pool machines, which were delivered in February 2003. In June 2003, Mr Robinson met a representative of Gamestec at a small trade show in London and informed him that Nova could now proceed with providing a software version of Pocket Money for the Gamesnet terminal.
27. At the same show a demonstration version of Jackpot Pool was unveiled by Mazooma. Reaction to the game was positive. Final work on the game was completed shortly thereafter and it was sent to Games Network for evaluation. I will deal with the design of the Jackpot Pool game in detail later in this judgment.
28. In July 2003, Mr Robinson discovered that Jackpot Pool was now available on the Leisure Link IT Box terminal and that it carried a Mazooma copyright notice. Accordingly, he tried to contact Mr Wilson at Mazooma to discuss it. Eventually he spoke to a Mr Burns who told him that Jackpot Pool was an original Mazooma game.
29. In September 2003, Mr Robinson of Gamesnet and Mr Taylor of Gamestec met once again to discuss the possibility of making Pocket Money available on the Gamesnet

terminal. Nova received a test terminal for development work on 29 September 2003 but ultimately nothing came of it.

Leisure Link

30. Nova also had dealings with the Leisure Link group of companies. In 2001, Mr Weir, the Commercial Director of Leisure Link, met Mr Robinson and explained to him that Leisure Link was looking to acquire games from designers for use on its new terminal, the IT Box. At that stage Mr Robinson was not enthusiastic because he considered that the greatest potential lay in selling stand alone machines.
31. In early 2002 Nova launched the Pocket Money game and, during the course of the year, Leisure Link bought a number of machines. By February 2003 Leisure Link apparently operated some 150 such machines. At about this time Mr Robinson again met Mr Weir who explained that Inspired had been formed for the purposes of providing software for Leisure Link's IT Box terminals. At this point Mr Robinson was more enthusiastic. He saw the possibility of adding Pocket Money to Leisure Link's network which now extended to some 4,000 terminals.
32. During the course of 2003 dealings between Nova and the Leisure Link group continued. Inspired supplied a terminal to Nova in order that it could start the work of converting the program to run on the IT Box and discussions took place as to royalties. Various delays took place in the course of 2003 and Mr Robinson suggested that Inspired was stalling. I reject this suggestion. I heard evidence from Ms de Kerckhove, the Chief Operating Officer of Inspired, which I accept, that the Leisure Link group was keen to have the Play Pool tournament version of Pocket Money available on the IT Box network. She was, in particular, attracted to the tournament function. However, a series of problems ensued. First, there was a delay in getting an IT Box terminal to Nova for development purposes. This was eventually resolved in the summer of 2003. Secondly, there was a substantial debate between Inspired and Nova as to the pricing of the games. IT Box was not subject to AMLD as all the games were priced at 50 pence. Nova, however, insisted that Play Pool be priced at £1. As a result, Inspired had to secure AMLD licences for 50 trial terminals. Thirdly, a version of Play Pool was received in August 2003 for validation of its technical performance. Unfortunately this process showed that the game had a number of technical flaws. The validation process was repeated on a number of occasions from September 2003 to the end of March 2004. Eventually the process was completed at about the end of March 2004 and Play Pool was then ported onto 50 test sites at the beginning of April 2004. Regrettably, it was not a success because technical problems persisted and the cost per play of £1 proved too expensive. Consequently, the project gradually came to an end.
33. Meanwhile, in early 2003, a Mr Ollett, an acquisition manager of SWP games for Inspired, saw an advert for Jackpot Pool. In February 2003 he had an opportunity to look at the game and was attracted by the pool theme. The game was sent over to Inspired for testing and evaluation in April 2003 and passed without significant problems. It was launched on the IT Box in the Spring of 2003 and has remained there ever since. Mr Ollett was aware of Nova's Pocket Money game when he contacted Mazooma and

thought it a very good game. This confirmed to him the attractiveness of a pool style game but did not influence him in deciding to launch Jackpot Pool on the IT Box. I accept his evidence.

34. Ms de Kerckhove was aware of Jackpot Pool from the time of its launch on the IT Box. She did not consider that Jackpot Pool was related to Pocket Money. She considered that Pocket Money was a connected tournament game (by which she meant that players on different terminals could compete against each other) whereas Jackpot Pool was a simple standard action game. Jackpot Pool had no bearing on her discussions and her approach to Nova regarding Pocket Money. She explained that it was common to have several different games with a common theme on the same terminal. She considered that Jackpot Pool and Pocket Money were different interpretations of the game of pool. I accept her evidence on all these points.
35. In the light of this large body of evidence I accept that Pocket Money was recognised by those in the SWP industry to be a very successful game. However, I reject the suggestion advanced by Mr Robinson in his evidence that the defendants were involved in stalling Nova or in some way stringing Nova along while preparing to launch the Jackpot Pool game.

Bell-Fruit

36. I deal with the design of the Bell-Fruit Trick Shot game later in this judgment and so for present purposes I need only provide the following outline. Nova had no direct dealings with Bell-Fruit save that in September 2002 Mr Austin discussed with Mr Robinson the possibility of Bell-Fruit making Pocket Money on Nova's behalf. This suggestion was not pursued. It seems that Bell-Fruit was certainly aware of Pocket Money from, at the latest, August 2002. Mr Austin accepted that Nova's game may well have inspired a chain of interest in table based pub games such as pool and snooker bar billiards. The Trick Shot game was developed in early 2003 and launched in about September of that year. It appears that the first machines were actually released for sale in January 2004.
37. Towards the end of 2003 Bell-Fruit decided to launch another version of the game in what it called its "Casino" or "round top" cabinet. Although given the name "Casino", such machines were sold for use in arcades and bingo halls and were generally less complicated than the standard Bell-Fruit AWP games. The Casino version of Trick Shot was released for test in the course of 2004. It was not, however, a success and in December 2004 was recalled due to poor performance. In these proceedings complaint is made of the standard and round top versions of Trick Shot.

The experts

38. Mr Davies gave expert evidence on behalf of Nova. He graduated from the University of Wales in 1977 and joined a company called JPM International Ltd ("JPM"), based in Cardiff. He was essentially responsible for JPM's intellectual property portfolio and his duties included looking at machines and patents filed by competitors in the amusement

games field. JPM was at all times a subsidiary of the well known games manufacturer Sega and was a joint owner with Gamestec and Bell-Fruit of Games Network. As a result of his employment Mr Davies was familiar with the activities of Mazooma, Gamestec, Games Network, Inspired, Leisure Link and Bell-Fruit. Mr Davies did not, however, have any experience of designing the software or graphics of any video game. Mr Davies gave his evidence in a straightforward manner and I accept that he was doing his best throughout to assist the court. Nevertheless, it became apparent during the course of his cross-examination that he understood his duty to be to look for similarities in the games in issue rather than making an overall assessment of the games, including their similarities and differences. Moreover, in assessing the similarities he relied essentially upon the list of similarities and video provided to him by Nova and spent only about 20 minutes playing each of the games in issue.

39. Two expert witnesses gave evidence on behalf of the defendants. The first, Mr Robert Lawrence, began working in the games design industry in 1982 as a software programmer for a company called Barcrest which was at that time (and remains) the largest manufacturer of gaming machines in the United Kingdom. Over the course of the ensuing years he has acted not just as a programmer but also as a co-ordinator of the processes of game design and development, a manager of game design, graphics studio and development teams and has also taken responsibility for game programmers. In summary, he has carried out most roles within the game design and development process, from game designer through to “product champion” or lead product designer. I have found his evidence to be of considerable assistance. He was a clear and careful witness.
40. During the course of his cross-examination Mr Lawrence disclosed that he had known, for a considerable period of time, Mr Wain, Mr Wilson and Mr Austin who were involved, in different ways, in the designs of which complaint is made. It was suggested that he was bound to be influenced against the thought that such long-standing colleagues might have been involved in copying. I reject that suggestion. Mr Lawrence gave his evidence in a wholly objective way.
41. The second expert on behalf of the defendants was Mr Archer Maclean. He has been intimately involved with computer games for over 25 years and is something of a legend in the industry. He has designed, written or produced a considerable number of games. He provided a brief history of the development of video snooker and pool games since the advent of video games in the early 1970s and considered all of the features that Nova claim in these proceedings are original to them and explained the extent to which they are to be found in earlier games. Mr Maclean was also a clear and objective witness and I found his evidence to be of great assistance

Overview of the games

42. In order to consider the similarities between the games upon which Nova rely in support of their allegation of infringement and the issues of copying and reproduction of a substantial part of any relevant copyright work it is necessary to have an understanding of how each of the three games in issue is played and appears to the user. For this purpose I was provided with a number of videos and also with the opportunity to play each of the

games in court during the period of the trial. Further, and during the course of cross examination, various parts of different games were played to the witnesses. It is difficult to convey all the impressions that I gained in this written judgment. Nevertheless, it is right that I record that those impressions have played an important part in my decision making process.

43. The overview which I set out below is taken in large part from the report of Mr Lawrence with which Mr Davies did not disagree.

Pocket Money

44. This is a stand alone SWP game which has two stages. In the first stage the player has to pot as many of the randomly arranged balls as possible to accumulate a prize fund. In the second stage, which is called the trick shot stage, the player strikes a ball at the top cushion with a view to it rebounding and coming to a halt in a prize square. If he succeeds he wins a prize.
45. The game is housed in a large chipboard cabinet at the top of which is mounted a cathode ray display. The game is driven by a personal computer system, bolted inside the bottom of the cabinet. On the front panel are two 'shoot' buttons and a rotary device which controls the direction of the cue. While waiting for the player to insert coins and start the game, the machine runs in what is known as "attract mode". At this stage some of the sequences of the game are presented in three dimensions and some in two dimensions. Once the game starts, however, the images are all presented in two dimensions although the balls have a shadow effect behind them which gives a partially three dimensional effect.
46. The first stage of the game begins when the player inserts a £1 coin. A series of screens are then shown which show the player the object of the game and instructions how to play it. A pool table appears in portrait layout on the screen, with the long sides extending vertically. The table has six pockets, a green felt surface with a central lighting effect and a simulated wooden edge. The machine displays "RACK 1" over the centre of the table. At the top of the screen the word "PURSE" appears with an arrow pointing towards a display of the player's accumulating winnings and at the bottom of the screen is a graphic of a payout cup. When the player wins, a graphic of a coin falls from the 'purse' to the 'payout cup'.
47. The balls are then shown in their starting positions and a countdown timer begins.
48. At the start of the game the balls are, in a general sense, near the six pockets. There are a number of different starting positions, but the one I describe below was seen by Mr Lawrence when he inspected the machine.
- i) A cue ball is shown in white and placed in the bottom centre of the table.
 - ii) A number of blue balls are placed at different position on the table, some near the pockets and some over the pockets. These are the balls the player has to pot to accumulate money in the purse.

- iii) There is also a yellow ball with a red five pointed star which is used to award various special features when potted. It usually doubles the value of the cash in the purse but can occasionally give an instant win of £1.
 - iv) There are two black balls with a skull and crossbones over two of the pockets. Hitting or potting these balls counts as a foul.
 - v) During the game a chequered white and pink 'extra time' ball flashes onto the screen and then, after a period of time, vanishes.
49. Next to each of the pockets and set in the wooden surround is an indicator which shows the amount that will be added to the purse if the player pots a blue ball into that pocket. The values change after each shot and reflect the difficulty of potting the ball into that particular pocket.
50. The player takes aim by rotating the rotary controller which in turn causes the cue to rotate around the cue ball. A line of dots extends from the cue ball on the opposite side to the cue showing the direction of the shot or 'sight line'. This row of dots rotates together with the cue.
51. The bottom cushion of the table contains a power bar indicator which continually cycles up and down. The cue also pulses in and out, as do the white dots extending from the cue ball in the direction of the shot. They are synchronised together. Thus, when the power meter shows a high power the cue is drawn back to its furthest extent and the dots extend to their greatest length. When the power meter is at its lowest power the cue is closest to the cue ball and the dots are at their shortest length. Hence, by appropriate movement of the rotary device the player can control the direction of the shot and, by choosing the appropriate moment through the power cycle, the player can choose the strength of the shot.
52. The dots are not regularly spaced one from another and their spacing increases the further they are from the cue ball. The dotted lines stop short of the target ball or cushion on longer shots and appear to reach about half the length of the table.
53. The goal is to pot as many blue balls as possible in the time allowed. As the player pots each ball, the value shown by the pocket is added to the purse and this is represented by a graphic of coins travelling from left to right across the top of the screen. The values change in proportion to the difficulty of the shot.
54. If a black skull and cross bones ball is hit before another ball then the value of the money in the purse is halved. If such a ball is potted then the purse is emptied. If the player pots the yellow ball with the red star then the value of the cash in the purse is usually doubled but the machine may give an instant win of £1.
55. About halfway through the game the machine usually offers the white and pink extra time ball. If this is hit with the cue ball then extra time is allowed. If it is not hit within a certain limited time then it vanishes and the chance for any extra time is lost.

56. If the player manages to clear the table then he is given another rack, the machine displays 'RACK 2' and the balls are set up again. This time there are fewer balls, the felt is coloured blue and the balls which the player has to pot are coloured red. Otherwise the game carries on much as before. The purse is carried over from Rack 1 and ten seconds is added to the timer. The prizes are also a little higher.
57. Once the time runs out in Rack 1 and, if played, Rack 2, the first stage terminates and the game moves on to the Trick Shot round. At first, a screen explaining the rules is shown and then the Trick Shot table. This has six rectangular fixed prize panels and a round panel marked "WIN PURSE" with the value of the purse which has accumulated. The player is presented with a cue ball which he must hit to the top cushion, which now flashes. It must then rebound and come to a stop within one of the prize panels shown in the table. If the ball lands in one of the fixed panels the value marked in that panel is paid out. If it lands in the "WIN PURSE" panel then the value of the purse is paid out or, if there is nothing in the purse, the player gets £1. The player is allowed a maximum of 20 seconds to play the shot. If the shot is not taken before the time runs out or if the ball fails to hit the top cushion then the player wins nothing.
58. Overall Mr Lawrence recognised, fairly, that the game is quite captivating.

Trick Shot

59. The Bell-Fruit Trick Shot game is a traditional AWP game housed in a stand alone cabinet. As I have mentioned, there were two versions of the machine before me. The first, called the standard or square top machine, is the machine upon which most attention was focussed during the trial and is used in the pub market. The second, the round top machine, is targeted at the much smaller entertainment centre arcade market. I will concentrate in this description on the square top machine.
60. The main game is played just like other fruit machine game using spinning wheels behind the bottom glass. The pool feature game which has precipitated these proceedings is played behind the top glass. Part of this uses a small LCD screen to show a pool table which may be used at various points in the game in a number of different ways.
61. The main game begins once the player has inserted enough coins to cover the price of play. The start button is pressed and the bottom wheels spin. Using standard features such as "start", "hold", "nudge", and "collect" the player may achieve a winning combination. The game also includes a number of other rather complicated features. There is a cash ladder, a "High-Lo" gamble feature, a feature exchange facility and a feature trail. There is no need to explain the details of how these function for the purposes of these proceedings. Further, on the LCD screen below the pool table there is a representation of seven pool ball positions called shot indicators. These are initially all unlit but may be lit if the player achieves various combinations on the spinning wheel win line, or by landing on pool ball symbols on the feature trail.
62. If the player achieves one of a number of winning combinations then he may play one of seven different pool feature games.

63. When the game enters any one of the seven pool features the screen layout comprises a table arranged in portrait format and shown in two dimensions. The table is covered with green felt and has large out of size cushions. It has a central lighting effect. A white line crosses the table towards one end and carries a “D” in a representation of the markings on a conventional table. There are no shadows under the balls although they are given a highlight to give a spherical effect. The pockets are large and the whole pool table has a rather comical appearance. The pockets have attached to them yellow tabs which show various advantages that the player can win by potting a ball into any particular pocket.
64. A representation of a cue appears behind the cue ball. The cue is short compared to the size and length of a real pool cue. The cue may be rotated around the cue ball by the use of a ‘shoot pool’ button on the front of the cabinet. A line of blue crosses extends on the opposite side of the cue ball which enables the player to see the projected path of the shot. The blue crosses are evenly spaced and extend to the first object, whether ball or cushion, in the path of the shot.
65. There is a power bar in the top edge of the cabinet which cycles up and down in time with the cue which pulses in and out. The blue crosses indicating the sight line do not, however, move. The shot is taken when the player presses the centre of the shoot pool button. The strength of the shot is determined by the point in time during the power cycle at which it is taken.
66. I will now summarise each of the seven pool games and then the round top machine.

Shoot Pool

67. In the “Shoot Pool” game the table is set up with the cue ball at the apex of the "D" at the bottom of the table and there are five red balls and one black ball in a triangle at the top of the table. The player uses the rotary control to move the cue around the cue ball and so take aim and presses the rotary control button in order to take the shot. The aim of the game is to pot the red balls into one of the six pockets. The player then gains the advantage shown over that pocket.
68. The player needs at least three pool balls on the pool ball indicator to be lit to play the game. If the number of lit balls falls below the minimum of three balls then the feature terminates until the player wins more balls, at which point he can play on. There is no time limit for the player to take a shot but if the player shoots and misses then he loses one of the lit balls on the pool ball indicator.
69. Advantages shown on the pockets change after each shot and may be, for example, extra steps in the cash ladder or extra shots for the Shoot Pool game. Cash values are not available. If the player pots either the white ball or the black ball then a foul shot is committed and the game terminates.
70. The game is not timed and at any point the player can press the main start button to spin the “High-Lo” reel again. He may return to the pool game when he chooses.

Hidden Features

71. If, during the main game, three separate balls with blue overprinted backgrounds appear on the win line then the machine sets up the pool table for this game. A yellow ball is placed over each of the six pockets and all six tabs show the words "Hidden Feature". The cue ball is placed in the centre of the table and the player has to pot one of the balls into a pocket to secure the feature associated with that pocket. There is no time limit for the player to take the shot and the feature behind each of the six symbols is always the same. The player may accordingly learn these features and effectively choose which feature he wishes to secure.

Pot to Continue

72. As the player progresses around the feature trail he may land on a "?" symbol which in turn may bring up the "Pot to Continue" game. In this mode the pool table is set up with the cue ball at the apex of the "D" at the bottom of the table and three yellow balls in a triangle at the top of the table. All the pockets are marked "Continue" and the player has one shot to get one of the yellow balls into a pocket to keep the game going. If the player fails then the game terminates. Once again, there is no time limit for the player to take the shot.

Trick Shot

73. If, while progressing around the feature trail, the player lands on the "Trick Shot" position then the player enters this game. Here the pool table is set up in the same way as for "Pot to Continue" but all the pockets are marked with a "+" and a pool ball. If a player manages to pot a yellow ball into a pocket then an extra pool ball shot indicator is lit. If the player fails to pot a ball or pots the cue ball then the feature terminates and the main game continues with the existing number of balls on the pool ball shot indicator.

Down in One

74. In this game the cue ball is placed at the apex of the "D" and 6 yellow balls are arranged in a triangle at the top of the table. Over each pocket appears a £1 sign. For each yellow ball the player pots he is awarded £1. If the player fails to pot a yellow ball then he may be offered another attempt. If the cue ball is potted then the game terminates. There is no time limit for the player to take the shot.

Pound a Pocket

75. This game is similar to Down in One and arranged in the same way. In this game the player is awarded £1 for each yellow ball potted until the time allotted for the game runs out. If the player misses or fails to pot a ball then he simply continues. If he pots the cue ball he loses what he has won thus far but continues playing until the time is up.

Crazy Balls

76. This game is again set up in the same way as Down in One and Pound a Pocket but each of the pockets is now marked with £5. There is no time limit on the game but if the player misses or fails to pot a ball he is given one more chance. If he misses a second time the

feature terminates but he is paid any winnings that he has accumulated. If he pots the cue ball then the feature terminates but again the player keeps any winnings that he has accumulated.

Round top machine

77. The round top machine is, as I have indicated, rather simpler than the standard machine. If the pool balls appear on the win line then the pool feature is accessed. The machine has one pool game, with the same basic graphics as the standard machine. The table starts with five red balls and one black ball placed on the table in a triangular break format and a cue ball in the “D” area. Each pocket has a cash or extra time value associated with it. If the player successfully pots a ball either the time is extended or the cash increments in a cash LED meter above the video screen. The value on the pocket changes after every shot in the following way: the closer the ball is to a pocket the lower the value associated with that pocket. When the timer stops the player is awarded the total value on the meter. If three foul shots are committed during play then the game terminates with no win.

Jackpot Pool

78. This is a touch screen SWP pool game played on a multi game terminal. It is, as Mr Lawrence explained, a close imitation of a real game of pool requiring skill and strategy to accumulate points and cash. The game displayed to me during the course of the proceedings was housed in a Gamesnet terminal.
79. To play the game a coin is inserted and Jackpot Pool selected. There are two versions of the Jackpot Pool game; a one player version which is a payout game with values over the pockets and a two player game which is for amusement only. These proceedings are only concerned with the one player game.
80. The game is played in two stages. In the first stage the player tries to accumulate points. If this is completed successfully he goes on to the second stage where cash is awarded for the balls potted. But the player has to clear all the colours and pot the black in order to win the money.
81. Once the game begins a two-dimensional representation of a pool table is displayed and this closely resembles and appears to be in similar proportion to a real pool table. It has a green felt and wooden edges. The game sets up a classic pool arrangement with seven red, seven yellow and one black ball. The player begins by placing the white cue ball by touching the screen along a white ‘break’ line. There is no “D”. He is then invited to break.
82. The direction of the shot is controlled by touching the screen. The cue rotates around the cue ball into position and a line of crosses extends from the cue ball on the opposite side to the cue and indicates the direction the shot will take.
83. At the bottom of the screen there is a cue ball graphic with, on either side of it, two panels marked “Rotate”. Around the outside of the cue ball graphic is a timer.

84. The direction of the shot can be fine tuned by using two rotate panels. One rotates the cue in an anti clockwise direction and the other rotates the cue in a clockwise direction.
85. Once the player has decided on the direction of the shot he touches the cue ball graphic. At this point the two rotate buttons are replaced by two power meters which appear on either side of the cue ball graphic. They pulse up and down and the cue pulses in and out in a synchronised manner. At the same time and around the circumference of the cue ball button a timer counts down the amount of time left to take the shot and the cue ball graphic carries the flashing sign "Press when ready". The player judges when the power is at the right level and presses the button to take the shot. If the time runs out then the machine takes the shot automatically.
86. There is also a facility whereby the player can put a spin on the ball. He does this by touching the cue ball at a particular position which indicates where he would like the cue to strike.
87. If the player pots any balls during the break then he is awarded points. In any event, once the break is taken he is asked to choose the colour of the balls that he wishes to play for. The other set of balls are removed, with the exception of the black, which remains.
88. The game displays points (or other features) over each pocket on hexagonal spinning logos. If a ball is potted then the associated number of points is awarded. After each shot the values move one position clockwise. With skill a player can plan a shot so that he has an easy ball to pot over a pocket where a high value will appear.
89. If the player accumulates 1,000 points or pots all the chosen coloured balls and the black then he proceeds to the next stage. At the side of the table is a timer which counts down during the entire game. If the time runs out before the player has accumulated 1,000 points or cleared the table then the game terminates. If the player pots the white or hits the black before a colour then a time penalty is awarded.
90. The game also has an action replay feature which may be activated at any time by the player pressing an on-screen button.
91. The points stage of the game has a number of other features. Once a ball is potted and the points awarded then the machine may replace the points hexagon with any one of nine different features, each of which gives the player an advantage. For example, another ball potted into a pocket showing one such advantage may give the player extra time to complete the level. Another feature awards the player an extra life. A third feature awards a cash value. In this case a hexagonal logo featuring either a £1 or £5 value is shown and if the player pots a ball into the pocket while the feature is shown he is awarded that cash value.
92. If the player achieves 1,000 points or clears the table then he moves to the second stage called the "Cash Table". Once again the game sets up a classic pool table format with seven red balls, seven yellow balls and one black ball and the game invites the player to place the white ball by touching the screen. He is then invited to break and choose the

colour of balls that he wishes to play for. The game does not, however, remove the other coloured balls in this stage.

93. The game displays cash values over each pocket and if the player pots a ball into a pocket the appropriate cash value is added to the bank. In this stage of the game the values do not rotate around the table. The player does not win the money in the bank until all the chosen balls and the black ball have been potted.
94. If the player pots the black ball out of sequence the game ends and he wins nothing. However, he may press an 'on screen' panel to choose to try and pot the black at any time during this second stage. If he succeeds he is awarded the bank contents at that point in time. Similarly, if at any time the player pots one of the other coloured balls then the game ends. If the player pots the white ball or hits the black ball before a colour a time penalty is awarded.
95. Once again the stage is timed and the timer is shown at the edges of the table. If it reaches zero before the player has potted the black ball the game ends and the player wins nothing.

The issues

96. Against this background two broad issues fall to be determined:
 - i) Did the defendants copy Pocket Money when they created their respective games Jackpot Pool and Trick Shot?
 - ii) If so, did that action involve the reproduction of a substantial part of any work in which Nova owns copyright?
97. Before considering these issues, it is however necessary to identify the particular copyright works upon which Nova relies. Nova has identified the following categories of copyright works in its pleaded case:
 - i) Artistic works being the bitmap graphics and the frames generated and displayed to the user;
 - ii) Literary works, being Mr Jones' design notes and the program which he wrote to implement the game;
 - iii) A dramatic work embodied in the game itself;
 - iv) Film copyright.

Artistic Works

98. The case developed before me by Mr Howe QC, who appeared on behalf of Nova, was that the bitmaps and the frames of the game which appear on the screen are works which embody and reflect Mr Jones' creative work in devising the visual output of the game

which the player sees. It was not suggested that the defendants' games involve a reproduction of any particular bitmap files as such, but rather of the composite frames which are displayed upon the screen.

99. Section 4(1) of the Copyright, Designs and Patents Act defines artistic works and graphic works as follows:

"4.—(1) In this Part "artistic work" means—

(a) a graphic work, photograph, sculpture or collage, irrespective of artistic quality,

(b) a work of architecture being a building or a model for a building, or

(c) a work of artistic craftsmanship.

(2) In this Part—

.....

"graphic work" includes—

(a) any painting, drawing, diagram, map, chart or plan, and

(b) any engraving, etching, lithograph, woodcut or similar work;"

100. It is to be noted that the definition of "graphic work" is inclusive. Paintings, drawings and the like are examples of graphic works protected by the Act but the definition is not restricted to the specific exemplars given. In my judgment, and for the reasons which I elaborate briefly below, the definition is apt to cover images of the kind generated on the screen when Pocket Money is played. I did not understand this to be disputed by Mr Carr on behalf of the defendants and accordingly I will deal with it quite shortly. Furthermore, for the purposes of this analysis, I will assume that all the creative work was carried out by Mr Jones.
101. First, Mr Jones created bitmap files using various computer tools such as the mouse and on-screen tools such as notional brushes and pencils and the screen colour palette. These images are stored in the computer memory. They create a visual effect which is very similar to that of a painting or drawing. In my judgment these images are "graphic works" within the meaning of the Act.
102. Secondly, it is necessary to consider composite frames generated by the computer program using the bitmap files. The program builds up composite images by taking, for example, the bitmap image of the table and then overlaying it with images of the balls, cue and the like. In the computer memory many different images of each of these items are stored. So, for example, images of the cue are stored in a large number of different

orientations. One of these will be selected by the program to create an appropriate image of the cue on the screen.

103. The display of a series of composite frames may create an impression of movement in much the same way as the successive frames of a cartoon film. Thus, for example, the impression of movement of the cue in relation to the cue ball is created by the display of a series of frames, each showing the cue in a slightly different position in relation to the cue ball. Each of these frames is again a composite image and stored in the computer memory.
104. In my judgment these composite frames are artistic works. They were created by Mr Jones or by the computer program which he wrote. In the latter case the position is governed by s. 9(3) of the Act:

"3—In the case of a literary, dramatic, musical or artistic work which is computer-generated, the author shall be taken to be the person by whom the arrangements necessary for the creation of the work are undertaken."

And by s.178:

““Computer-generated”, in relation to a work, means that the work is generated by computer in circumstances such that there is no human author of the work;”

105. In so far as each composite frame is a computer generated work then the arrangements necessary for the creation of the work were undertaken by Mr Jones because he devised the appearance of the various elements of the game and the rules and logic by which each frame is generated and he wrote the relevant computer program. In these circumstances I am satisfied that Mr Jones is the person by whom the arrangements necessary for the creation of the works were undertaken and therefore is deemed to be the author by virtue of s.9(3).
106. Before leaving this topic there is one further complexity I must consider and that is the effect of player input. The appearance of any particular screen depends to some extent on the way the game is being played. For example, when the rotary knob is turned the cue rotates around the cue ball. Similarly, the power of the shot is affected by the precise moment the player chooses to press the play button. The player is not, however, an author of any of the artistic works created in the successive frame images. His input is not artistic in nature and he has contributed no skill or labour of an artistic kind. Nor has he undertaken any of the arrangements necessary for the creation of the frame images. All he has done is to play the game.

Literary copyright

107. Section 3(1) of the Act (as amended by the Copyright (Computer Programs) Regulations (1992)) provides:

“3(1) In this Part:

"literary work" means any work, other than a dramatic or musical work, which is written, spoken or sung, and accordingly includes:

- (a) a table or compilation other than a database,
- (b) a computer program,
- (c) preparatory design material for a computer program, and
- (d) a database;”

108. The 1992 Regulations implement Council Directive 91/250/EEC of 14 May 1991 on the Legal Protection of Computer Programs (“the Software Directive”). So far as relevant, Article 1 reads:-

“1. In accordance with the provisions of this Directive, Member States shall protect computer programs, by copyright, as literary works within the meaning of the Berne Convention for the Protection of Literary and Artistic Works. For the purposes of this Directive, the term ‘computer programs’ shall include their preparatory design material.

2. Protection in accordance with this Directive shall apply to the expression in any form of a computer program. Ideas and principles which underlie any element of a computer program, including those which underlie its interfaces, are not protected by copyright under this Directive.”

109. Mr Carr accepted on behalf of the defendants, as he was bound to, that the computer program embodied in Pocket Money is a literary work. Further, it was accepted that the design notes created by Mr Jones and to which I have referred to in paragraphs 14 and 15 above constitute preparatory design material for a computer program and are therefore a literary work within s.3(1)(c). The real issue between the parties is whether or not the defendants’ programmers and designers, when programming their respective computers to produce visual effects which are contended to be similar to those produced by the Pocket Money program, thereby reproduced Nova's copyright works. This is a matter to which I return in considering the issue of infringement.

Dramatic work

110. It was contended on behalf of Nova that the visual experience generated by Pocket Money is a dramatic work. In particular, it was submitted Pocket Money generates an ordered sequence of events within an overall framework and in this regard particular reliance was placed upon the sequence of the cue pulsing in and out in conjunction with the power meter, followed by the cue striking the ball and the rolling behaviour of the

ball on the two dimensional surface of the table. The defendants dispute that any dramatic work subsists in Pocket Money at all.

111. Pursuant to s.3(1) of the Act, "dramatic work" includes a work of dance or mime. Further, s.3(2) provides that copyright does not subsist in a dramatic work unless and until it is recorded, in writing or otherwise. Finally, it is to be noted that pursuant to s.3(1), literary work means "any work *other than a dramatic* or musical work, which is written, spoken or sung" (emphasis added). Accordingly, a work cannot be both a dramatic work and a literary work.
112. The meaning of a dramatic work was considered by the Privy Council in *Green v Broadcasting Corporation of New Zealand* [1989] RPC 700. The appellant, Mr Green, was the author, presenter and compere of the well-known television show entitled "Opportunity Knocks". The respondent broadcast a similar television show under the same title in New Zealand. Mr Green complained that his copyright which subsisted in "the scripts and dramatic format" of "Opportunity Knocks" had been infringed. By "dramatic format" the appellant meant the characteristic features of the show which were repeated in each performance. These were the title, the use of various catch phrases, the use of a device called a "clapometer" to monitor audience reaction and the use of sponsors to introduce competitors. Lord Bridge held at page 702:

"It is stretching the original use of the word "format" a long way to use it metaphorically to describe the features of a television series such as a talent, quiz or game show which is presented in a particular way, with repeated but unconnected use of set phrases and with the aid of particular accessories. Alternative terms suggested in the course of argument were "structure" or "package". This difficulty in finding an appropriate term to describe the nature of the "work" in which the copyright subsists reflects the difficulty of the concept that a number of allegedly distinctive features of a television series can be isolated from the changing material presented in each separate performance (the acts of the performers in the talent show, the questions and answers in the quiz show etc.) and identified as an "original dramatic work". No case was cited to their Lordships in which copyright of the kind claimed had been established.

The protection which copyright gives creates a monopoly and "there must be certainty in the subject matter of such monopoly in order to avoid injustice to the rest of the world": *Tate v. Fulbrook* [1908] 1 K.B. 821, per Farwell J. at page 832. The subject matter of the copyright claimed for the "dramatic format" of "Opportunity Knocks" is conspicuously lacking in certainty. Moreover, it seems to their Lordships that a dramatic work must have sufficient unity to be capable of performance and that the features claimed as constituting the "format" of a television show, being unrelated to each other except as accessories to be used in the presentation of

some other dramatic or musical performance, lack that essential characteristic."

113. This passage emphasises first, there must be certainty in the subject matter of the monopoly in order to avoid injustice. Secondly, a dramatic work must have sufficient unity to be capable of performance and this will not be the case where features claimed to constitute "format" are unrelated to each other except as accessories to be used in the presentation of some other work.
114. The nature of an original dramatic work was also considered by the Court of Appeal in *Norowzian v. Arks (No. 2)* [2000] FSR 363. In this case the claimant shot a film called "Joy" on the flat rooftop of a building against a background of a canvas sheet draped over a structure on a roof. The whole action of the film consisted of one man dancing to music, but its striking feature was the result of filming and editing techniques employed by the claimant which involved a process called "jump cutting", with the result that the man apparently adopted certain changes in position which could never have been performed as successive movements in reality. This gave the finished film something of a surreal effect. At page 366 Nourse LJ (with whom the other members of the court agreed) explained:
- "In my judgment a film can be a dramatic work for the purposes of the 1988 Act. The definition of that expression being at large, it must be given its natural and ordinary meaning. We were referred to several dictionary and textbook definitions. My own, substantially a distilled synthesis of those which have gone before, would be this: a dramatic work is a work of action, with or without words or music, which is capable of being performed before an audience. A film will often, though not always, be a work of action and it is capable of being performed before an audience. It can therefore fall within the expression "dramatic work" in section 1(1)(a) and I disagree with the judge's reasons for excluding it. "
115. I take from this decision that "dramatic work" must be given its natural and ordinary meaning and that is a work of action, with or without words or music, which is capable of being performed before an audience.
116. I have reached the conclusion that it is quite impossible to say that the Pocket Money game is any sense a dramatic work for all the following reasons. First, it will be apparent from the nature of the game that I have described earlier in this judgment that it is not a work of action which is intended to be or is capable of being performed before an audience. On the contrary, it is a game. Although the game has a set of rules, the particular sequence of images displayed on the screen will depend in very large part on the manner in which it is played. That sequence of images will not be the same from one game to another, even if the game is played by the same individual. There is simply no sufficient unity within the game for it to be capable of performance.

117. Secondly, Nova relies in support of its claim for copyright infringement on various particulars of similarity. I deal with these in detail later in this judgment. However, it will be apparent from those particulars that Nova has sought to identify a number of distinctive features in the Pocket Money game which, it contends, have been reproduced in the defendants' games. In my judgment these features can no more be described as features of a dramatic work than could the features that Mr Green sought to rely upon in his case against the Broadcasting Corporation of New Zealand. They are not capable of performance. They are simply aspects of the Pocket Money game. Nor do they have the certainty needed in order to avoid injustice to third parties. As I will explain later in this judgment, they are drawn at a very high level of generality.
118. Thirdly, I understand it was contended that the dramatic work is recorded in the original development notes produced by Mr Jones and in the program code. As far as the development notes are concerned, I have accepted that these are a literary work. Accordingly, they cannot be a dramatic work. Further, they contain a whole series of different ideas, only some of which found their way into the finished game. They do not constitute a single work which is capable of being performed before an audience.
119. Fourthly, so far as the code is concerned, Nova sought to contend that the literary copyright subsists in the source code and the dramatic work is recorded in the object code. Nevertheless Nova has not explained how the dramatic work upon which it relies is recorded in the code. It has given no evidence about the code and indeed the source code was not provided to the defendants until shortly before the trial. As I explain below in considering the issue of infringement of the code as a literary work, it seems to me inevitable that the code contains not a record of any dramatic work but rather a set of instructions which dictates the way in which the game may be played and what will appear on the screen in response to the various inputs made by the person playing the game.

Film

120. In *Norowzian v. Arks (No. 1)* [1998] FSR 394 it was held that film copyright can only be infringed by photographic copying from the film. In the circumstances Nova concedes that the defendants cannot be held at first instance to have infringed any film copyright because Nova does not allege that the defendants have copied Pocket Money by photographic means. Nevertheless, Nova formally maintains this allegation of infringement of film copyright and reserves it for argument in a higher court.

Infringement – general principles

121. A major part of Nova's claim is founded upon the artistic copyright subsisting in the graphic images appearing on the screen. It is convenient to begin therefore by considering the relevant principles applicable to such artistic works. These were recently explained by the House of Lords in *Designers Guild Ltd v. Russell Williams (Textiles) Ltd* [2001] FSR 11. I derive from this authority the following propositions which have a bearing upon the present case.

122. First, the complaint in an action for infringement of artistic copyright is that the defendant has copied all or a substantial part of the copyright work. It is important to note, however, that while the copied features must be a substantial part of the copyright work, they need not form a substantial part of the defendant's work. The overall appearance of the defendant's work may therefore be very different from the copyright work while nevertheless infringing.
123. Accordingly, the first step in such an action is to identify those features of the defendant's design which the claimant alleges have been copied from the copyright work. These similarities form the foundation upon which the court will proceed to consider whether or not there has been copying. In arriving at its conclusion the court will consider the similarities and differences between the works and whether or not the particular similarities relied on are sufficiently close, numerous or extensive to be more likely to be the result of copying than coincidence. Similarities may be disregarded because they are commonplace, unoriginal, or consist of general ideas. If the similarities are such as to raise an inference of copying the burden passes to the defendant to establish that, despite the similarities, they did not result from copying.
124. Secondly, once copying is established then the question arises whether what has been taken constitutes all or a substantial part of the copyright work. At this point the only issue is whether or not the features which have been taken represent a substantial part of the copyright work. A visual comparison of the two designs to see the extent to which they may differ in appearance is unnecessary and liable to mislead.
125. Thirdly, in assessing whether or not a substantial part has been taken it is important not to deal with the copied features piece-meal. Rather, it is the cumulative effect of the copied features which is important. The court must consider whether, taken as a whole, they constitute a substantial part of the copyright work.
126. Three further important propositions emerge from the speech of Lord Hoffmann at [25] and [26]:
 - i) A copyright work may express certain ideas which are not protected because they have no connection with the literary, dramatic, musical or artistic nature of the work. So, for example, an artistic work which describes a system or invention does not entitle the author to claim protection for his system or invention as such. The same is true for an inventive concept expressed in an artistic work. However striking or original it may be, others are (in the absence of patent protection) free to express it in words of their own.
 - ii) Certain ideas expressed by copyright work may not be protected because, although they are ideas of a literary, dramatic or artistic nature, they are not original, or so commonplace as not to form a substantial part of the work.
 - iii) In cases of artistic copyright, the more abstract and simple the copied idea, the less likely it is to constitute a substantial part. Originality, in the sense of the

contribution of the authors' skill and labour, tends to lie in the detail with which the basic idea is presented.

127. There is one further important principle which I should mention at the outset. The issue of infringement must be considered in relation to each separate copyright work relied upon by the claimant. Copyright protects the skill and labour expended by the author in producing a particular work. This is of particular importance in the present case for the following reason. In the case of each of the games of which complaint is made Nova has identified a series of alleged similarities. All of these similarities do not, however, appear in each of the works relied upon. Indeed some do not appear in any of the artistic works relied on at all and are included to assist Nova to make good its case on copying. Particular care is therefore needed to assess whether or not, in so far as there has been copying, a substantial part of any particular work has been taken.
128. In considering literary works similar considerations in general apply. It is again relevant to ask the question in relation to each work relied upon: has the defendant taken a substantial part of the independent literary skill and effort expended by the author?
129. In the present case, however, additional issues arise because of the nature of the claim for infringement of the copyright in the computer program. It is not contended that the defendants ever had access to or copied the code itself. Rather, it is contended that the defendants have infringed the copyright in the program by copying the outputs which appear on the screen.
130. In these circumstances Nova face the difficulties explained by Pumfrey J in *Navitaire Inc v Easy Jet Airline Company* [2004] EWHC 1725 (Ch). There the claimants alleged infringement of copyright in computer software implementing an airline booking system called OpenRes. The defendants developed a similar system called eRes. It was not suggested that the underlying software of eRes resembled that of OpenRes, save that it acted upon very similar inputs and produced very similar results. The resemblance was described by the judge as “near identity in appearance and function” and, said the claimants, it could not have been achieved without a close inspection of the OpenRes system in action. The claimants relied upon various categories of copyright work, namely literary copyright in the command sets, artistic copyright in certain screens called GUI screens, literary copyright in certain other screen displays called VT100 screens and finally, of particular relevance to the present case, it was said that that the similarity exhibited by eRes to OpenRes in the eye of the user was such that that there had been non textual copying of the whole of the source code in much the same way that the taking of the plot of a book will infringe if a substantial part of the earlier author’s work is represented by that plot. The defendants responded that the latter allegation was objectionable because it extended the protection conferred to the intended effects of running the code on the machine in a business sense and amounted to a claim to the functional idea of the program rather than the expression of that idea in software.
131. The judge rejected the claims for infringement in respect of the command sets and the VT100 screens. In so doing he clearly had in mind the Software Directive. He considered that this made it clear that computer languages are not included in the protection afforded

to computer programs and that the command sets, both individually and as a compilation, were a language. The VT100 screens were ideas which underlay the interfaces of the program and accordingly excluded by Article 1(2) of the Software Directive. However, he allowed the claim in respect of the GUI screens because these, unlike the VT100 screens, were artistic works and outside the scope of the Software Directive.

132. Against this background the judge turned to consider the allegation of non textual infringement of the whole program based upon taking of the “business logic”. It is clear that he had some difficulty in identifying a level of abstraction that described something that was not merely inherent in the nature of the business function to be performed by the software and went wider than the command set and screen displays. This led him to consider the submission that there was an analogy between the function of a computer program and the plot of a novel. At [125] to [127] he said:

“125. This does not answer the question with which I am confronted, which is peculiar, I believe, to computer programs. The reason it is a new problem is that two completely different computer programs can produce an identical result: not a result identical at some level of abstraction but identical at any level of abstraction. This is so even if the author of one has no access at all to the other but only to its results. The analogy with a plot is for this reason a poor one. It is a poor one for other reasons as well. To say these programs possess a plot is precisely like saying that the book of instructions for a booking clerk acting manually has a plot: but a book of instructions has no theme, no events, and does not have a narrative flow. Nor does a computer program, particularly one whose behaviour depends upon the history of its inputs in any given transaction. It does not have a plot, merely a series of pre-defined operations intended to achieve the desired result in response to the requests of the customer.

126. The view in favour of Navitaire's case is expressed concisely by the authors of *The Modern Law* in paragraph 34.64 (I have assumed that when they speak of 'obtains...from the original program' they do not mean obtain directly, but indirectly from watching the program work):

For instance, the writing of a financing program may require as part of the task a careful elucidation of the relevant tax regulations—so that they may be reduced to a series of unambiguous statements—and it will be evident to any lawyer that this alone will probably involve a very large amount of work. A competitor might write a program of his own in a different computer language and arranged in a different way and with many improvements of his own but if he obtains the rules for calculating the tax from the original program instead of working these out for himself it is hard to see why he should not be considered a plagiarist.

127. There is a counter-example that throws some light on the nature of the problem. Take the example of a chef who invents a new pudding. After a lot of work he gets a satisfactory result, and thereafter his puddings are always made using his written recipe, undoubtedly a literary work. Along comes a competitor who likes the pudding and resolves to make it himself. Ultimately,

after much culinary labour, he succeeds in emulating the earlier result, and he records his recipe. Is the later recipe an infringement of the earlier, as the end result, the plot and purpose of both (the pudding) is the same? I believe the answer is no.”

133. After reciting a passage from the speech of Lord Hoffmann in *Designers Guild*, he continued at [129] to [130]:

“129. The questions in the present case are both a lack of substantiality and the nature of the skill and labour to be protected. Navitaire's computer program invites input in a manner excluded from copyright protection, outputs its results in a form excluded from copyright protection and creates a record of a reservation in the name of a particular passenger on a particular flight. What is left when the interface aspects of the case are disregarded is the business function of carrying out the transaction and creating the record, because none of the code was read or copied by the defendants. It is right that those responsible for devising OpenRes envisaged this as the end result for their program: but that is not relevant skill and labour. In my judgment, this claim for non-textual copying should fail.

130. I do not come to this conclusion with any regret. If it is the policy of the Software Directive to exclude both computer languages and the underlying ideas of the interfaces from protection, then it should not be possible to circumvent these exclusions by seeking to identify some overall function or functions that it is the sole purpose of the interface to invoke and relying on those instead. As a matter of policy also, it seems to me that to permit the 'business logic' of a program to attract protection through the literary copyright afforded to the program itself is an unjustifiable extension of copyright protection into a field where I am far from satisfied that it is appropriate.”

134. In these paragraphs the judge explained that the analogy with the plot of a book is a poor one when it comes to computers. Further, a distinction must be drawn between a set of instructions to produce something and the product itself. Most importantly, the decision reaffirms that it is important to consider whether the benefit of relevant skill and labour has been taken.

Particulars of similarities – general

135. The defendants in both actions requested Nova to identify each particular similarity relied upon and specify whether such similarity was said to support an inference of copying or that the defendants' games reproduced a substantial part of any and, if so, which copyright work. In response, Nova served a schedule of similarities and marked up screen shots to identify the relevant features. By the end of the trial Nova relied upon 12 such features in respect of Trick Shot and 13 such features in respect of Jackpot Pool. I deal with each of them below. However, before doing so, I would make two preliminary

observations. First, it is, in my judgment, extremely difficult to appreciate the extent of the similarities and differences between the games in issue without having an opportunity to see them in use or, better still, play them. To some extent an assessment may be made by comparing the still photographs upon which Nova rely and which I annex to this judgment. However I accept the submission of the defendants that this is a poor substitute for considering the features by reference to the games themselves.

136. Secondly, I formed the overall impression that the visual appearance and the rules of Pocket Money, Trick Shot and Jackpot Pool are all very different. There are certainly similarities between them which I address below. Nevertheless, each of the games looks and, to my mind, plays in a very different way. Some idea of this may be gained from the general description of each of the games which I have set out earlier in this judgment and which Mr Davis accepted to be fair. Indeed, he accepted in evidence that the overall look and basic mode of play of, on the one hand, the Pocket Money machine and, on the other hand, the Trick Shot and Jackpot Pool machines were dissimilar. Of all the games, Jackpot Pool had the closest resemblance to a real game of pool.

137. I now turn to consider the particular similarities relied upon.

Pocket Money and Trick Shot

1. Game 'with prizes' based on the theme of the game of pool

138. The screens alleged to show this similarity are at Annex A, page 1 of this judgment. It is of course true to say that both games are games with prizes based upon the theme of the game of pool. However, and as I have indicated, the games are fundamentally different. Pocket Money is an SWP game and hence primarily a game of skill. By contrast, Trick Shot is an AWP game with the video screen and representation of a pool table comprising only a very small part of the overall game. Mr Lawrence explained that the main "Shoot Pool" pool game occurs rarely, at a frequency of something in the region of 1 in 34 games. The other sub-feature games occur even less frequently.

2. Shows the table in plan view

139. The screens relied upon by Nova as showing this similarity are at Annex A, page 2 to this judgment. Once again this is a feature of both games but is cast in terms of such generality it obscures the fact that the appearance of the tables in plan view is in fact very different. Mr Davies and Mr Lawrence agreed that the representation of the pool table in Pocket Money is quite realistic, even down to the black plastic inserts in the pockets, the wide wooden edging around the table and the metal corners. In contrast, the whole layout of the Trick Shot pool table is very cartoon-like with, for example, the cushions being unrealistically wide. Further, the Pocket Money table does not have the base line and "D" semi-circle normally associated with a pool table and which are to be seen in the Trick Shot table.

140. Mr Lawrence and Mr Davies agreed upon two further important matters. First, Bell-Fruit was constrained to use a table in two dimensions by the graphics card which it uses.

Secondly, once a games designer is constrained to design in two dimensions a plan view is the only practical way of showing the table.

141. Mr Maclean explained that ever since the earliest video games, pool and snooker themed games have been written and that he is aware of in excess of 100 snooker and pool games being produced. Representation of the table in two dimensions is commonplace in such games with, in Mr Maclean's estimation, at least 75% of such games having such a format.

3. Pool table with distorted dimensions of length and breadth, pocket size and ball size.

142. This feature is also illustrated in the screens appearing at Annex A, page 2. It is right to say that both games have distorted pool table dimensions. A championship pool table has a length to breadth ratio of 2:1. However, as Mr Maclean explained, many real life pool tables are not made to championship dimensions and have a length to breadth ratio of up to 3:2. Further, most computer pool games do not adhere to championship regulations either. It is a commonplace feature of the design of such computer games tables that they have distorted dimensions in just the same way as do the Pocket Money and Trick Shot tables.
143. Further, Mr Davies and Mr Lawrence agreed that the pockets are only slightly oversized in the Pocket Money game and are not particularly distorted. In contrast, the pockets on the Trick Shot game are much larger than they should be. Similarly, the balls in the Trick Shot game are much larger than they should be. This has the consequence that it is much easier to pot balls in the Trick Shot game and, indeed, that, the experts agreed, is the general idea. By the time a player has reached this stage of the game it is intended that he *should* win. Once again the similarity is cast in such general terms that it conceals the fact that the appearance of the pool tables in these games is very different.

4. Shows, prior to the shot, a cue which although moveable under the control of the player, can only move under the control of the player by rotating around a cue ball, the rotation being by a single rotary controller.

144. This feature is said to be illustrated in the screens appearing at Annex A, page 3. So far as the movement of the cue is concerned, it will be appreciated that this is not a feature of any single graphic image. A single screen can only show the cue in one particular position. Furthermore, it is accepted that the rotary controller is not part of any copyright work at all.
145. Further, it was common ground between Mr Davies and Mr Lawrence that having the cue rotate around the cue ball was an obvious, common and functional way of showing the player how to direct the shot.
146. Mr Maclean explained that the majority of computer pool games in the last 20 years show a cue pointing at the cue ball and rotating around it under player control. It is fundamental to a pool game to show the direction of a shot, and generally speaking it is usual to show the cue rotating around the cue ball to indicate this. In my judgment this feature was commonplace. Mr Maclean also explained, and I accept, that once

implemented on an arcade game a variety of input devices such as buttons and rotary knobs were commonly used.

147. Mr Davies and Mr Lawrence also agreed that there is a material difference in the way that control is effected in the Pocket Money and Trick Shot games. Pocket Money uses a separate a rotary control knob to direct the shot and a choice of two separate buttons to select the power and instigate the shot. Trick Shot, however, has a custom designed rotary control in two parts. The outer part is used to select the direction of the shot and the inner part is a button which is pressed to select the power level and take the shot.

5. Shows the anticipated direction of the shot by a row of markers extending from the cue ball, the row of dots not necessarily showing the complete anticipated path of the cue ball.

148. This feature is said to be illustrated in the images appearing at Annex A, page 4. It is correct to say that both games show the anticipated direction of the shot by a row of markers extending from the cue ball. However, this feature has been implemented in Pocket Money and Trick Shot in rather different ways. The first difference is that in Pocket Money the dotted line never reaches more than half the length of the table. By contrast, in Trick Shot the dotted line extends to the first object it meets, whether a ball or a cushion, and no matter what the length of the shot. Secondly, Pocket Money uses a line of white dots whereas Trick Shot has a line of small blue crosses. Thirdly, in Pocket Money the direction is always indicated by five white dots whereas in Trick Shot a variable number of crosses is used depending on the length of the shot. Finally, in Pocket Money the line of dots pulsates in time with the power indicator and the cue. In Trick Shot the spacing of the dots is constant and there is no pulsation.
149. Further, I conclude that the idea of having a visual indication of the direction of the shot was commonplace. As Mr Maclean explained, nearly all two dimensional and three dimensional pool games produced over the last 20 years have had some form of dashed or dotted or solid view line projecting from the cue ball for aiming purposes. Mr Davies agreed that having an aiming or view line was a simple or common idea which has been executed differently in the two games.

6. Permits the player to alter the power by timing of the shot relative to a pulsing power level.

150. This feature is said to be illustrated in the images appearing at Annex A, page 5. Both games permit the player to alter the power of the shot by timing the shot relative to a pulsing power meter. Nevertheless, Mr Davis and Mr Lawrence accepted that this idea is implemented in the two games in different ways. In particular, in Pocket Money the power meter is in the bottom cushion of the pool table whereas in Trick Shot the power meter is in the top cushion. Secondly, in Pocket Money the power indicator is rectangular with square ends, whereas in Trick Shot it is longer and thinner with rounded ends. Thirdly, in Pocket Money the left hand end of the power meter is marked "soft" and the right hand end is marked "hard". In Trick shot there are no such markings. Fourthly, Pocket Money shows the word "CUE POWER" in black heavy type, whereas Trick Shot just has the word "POWER" in smaller orange type face. Fifthly, in Pocket Money the power meter changes from yellow, through orange into red in distinct blocks of colour,

whereas in Trick Shot the colour progression is evenly graduated. Finally, the power meter disappears after the player has taken a shot in Pocket Money, whereas in Trick Shot the power meter freezes to show the power with which the shot was taken.

151. Further, Mr Davies and Mr Lawrence were agreed that the use of a power meter was extremely common practice in games design and to have the power level pulsing was an obvious way to implement the feature and so permit the player to select what level of force he wishes to use. Mr Davies also accepted that having a pulsing bar going from left to right was a common choice by numerous games designers and that the colour scheme involving the use of yellow changing to red was also a common choice as it conveyed to the player the strength of the shot.

7. Shows the pulsing power level by an animation cycle in which (i) the cue moves away from and towards the cue ball, and (ii) a bar graphic varies with the power level

152. This feature is said to be illustrated in the images appearing at Annex A, page 6. It is a feature upon which Nova places particular reliance and it is indeed present in Pocket Money and Trick Shot. It is also closely related to feature (6) and the differences recited there are equally applicable here.
153. Mr Lawrence explained that in designing such a game he would probably have adopted a pulsing cue because a moving cue looks more realistic, is a closer representation of how the cue is actually used and because a moving cue indicates to the player more clearly the direction of the shot. Further, he explained that once this decision was made then linking the moving cue to the power meter was an obvious choice. To do otherwise would confuse the player. Mr Davies agreed that if a moving cue was adopted then linking it to the power meter was obvious, although he had a concern about a moving cue creating problems with aliasing. Mr Lawrence disagreed with this latter point and I am not satisfied that this was a valid concern. The experience of Mr Lawrence as a games designer was clearly superior to that of Mr Davies.
154. My attention was also drawn to three earlier games. The first, called Java Pool has a pulsing power meter and a pulsing cue, but the two are not synchronised. The second, called Cue Club, is a computer game with which Mr Starling, the games designer of Jackpot Pool, and to whom I refer below, was very familiar. In this game the power is set by the player using his mouse to adjust the power meter. The cue then moves with the meter, such that when the power is high the cue is further from the ball and when the power is low the cue is closer to the ball. The third, called Pocket Gal Deluxe has a synchronised link between the power meter and the cue, both of which pulse.
155. I am not satisfied that any of the games to which I was taken made this feature commonplace. However, I am satisfied in the light of Mr Lawrence's evidence that the feature was one of the obvious ways to implement the commonplace idea of having a pulsing power meter in a pool game.
156. There are further important points to note in relation to this feature. It is a dynamic characteristic of the games. Accordingly, it is not represented in any single frame,

although it is fair to say that in a frame there will be a spatial relationship between the position of the cue and the colouring of the meter. Secondly, the images set out in the Annex to this judgment represent only a part of any one relevant graphic work which must consist of the whole image appearing on the screen. Finally, and importantly, the concept is indeed present in both games but the way it has been implemented in practice is different for all the reasons I have indicated. The screens, as the witnesses accepted, look quite different.

8. Assigns values to each pocket and display each value in the vicinity of the pocket to which it relates in a generally rectangular box, the values comprising a win or a potential win, the values being present from the start of play

157. This feature is said to be illustrated in the images appearing in Annex A, page 7.
158. At certain points in the Trick Shot game values do appear in boxes associated with the pockets. This apart, however, the games are significantly different. The alleged similarity is cast at such a high level of generality that these differences are not apparent. They may be summarised as follows.
159. First, values are only assigned to pockets in three of the games appearing on Trick Shot, namely “Down in One”, “Pound a Pocket” and “Crazy Balls”. They also appear in the round top version of the game. These games do not, however, have feature (9), referred to below.
160. Secondly, Mr Davies and Mr Lawrence agreed that the graphical representation of this feature on the two games is completely different. They are different in appearance, colour and positioning. These differences are listed by Mr Lawrence in schedule 1, section 8 to his report.
161. Thirdly, the way in which the values are used in each of the games is very different. Once again these are listed by Mr Lawrence in schedule 1, section 8 of his report.
162. Further, Mr Maclean explained in his unchallenged evidence that having values associated with pockets was very common in video pool games.

9. Contains a feature whereby the balls are placed in a specific pattern, namely with the balls placed over each pocket

163. This feature is said to be shown in the images appearing in Annex A, page 8. I accept the submission advanced on behalf of Bell-Fruit that this is not an accurate description of a feature of the Nova Pocket Money game. As shown in the illustration relied upon, there is not a ball over each pocket.
164. There is only one game in Trick Shot which has this feature, namely “Hidden Features”. In this game, and as will be apparent from the description of the game provided above, the purpose of the game is quite different to that of Pocket Money. In Hidden Features, as soon as the ball is potted the feature is won. The features do not change and it is intended that players should get to know them. The balls are so placed as to make potting them

very straightforward. In contrast, the Pocket Money game requires skill and that obstructions be avoided. Further, there are monetary values attached to the pockets, and these change.

165. It is apparent from a cursory inspection of the two images relied upon that the graphics are quite different.

10. Use of the name Trick Shot

166. This is not a feature of any copyright work, but is said to be an indicator of copying.
167. Mr Maclean explained, and I accept, that the expression “Trick Shot” is often used in connection with snooker, billiard and pool type games and indicates an unusual or enjoyable shot. A number of games have been called “Trick Shot” over the last 25 years. It is a common term.

11. The pool table being a lighter shade of green at the centre than towards the edges as though lit by a central overhead light source

168. This feature was introduced by amendment at the start of the trial. In the light of the evidence of independent design it is not, however, pursued. Nevertheless it does appear to be pursued in relation to Mazooma. Accordingly, it is worth recording at this stage that Mr Davies accepted that it was an overwhelmingly obvious idea to have a centrally lit feature and that he would be surprised if a reasonably realistic representation of a video pool game did not have such a feature. Moreover, it was commonplace.

12. In the case of the round top game, the value on each pocket being determined by the position of nearby pottable balls in an approximate relationship to the difficulty of playing the shot

169. This feature was not introduced until the end of the trial and is not one upon which the experts commented. I would, however, note that it is not an accurate description of what happens in the two games. In Pocket Money the higher values are associated with the more difficult shots. In the case of the Trick Shot round top machine the value associated with a pocket is related to the distance it is from the cue ball.
170. Further, it is not a feature which is illustrated as such in any graphic work.

Pocket Money and Jackpot Pool

171. Many of the features which were relied upon in relation to Trick Shot are also relied upon in relation to Jackpot Pool and accordingly many of the conclusions set out above are equally applicable.

1. SWP game based on the theme of the game of pool

172. The screens relied upon are at Annex B, page 1 to this judgment. It is true that both games are SWP games based upon the game of pool. This is, however, a similarity at

such a high level of generality as to be virtually meaningless when it comes to comparing any particular works. Moreover, Mr Lawrence and Mr Davies agreed that their impression on seeing the two games was that they were very different and that the implementation of the two games was very different. I agree with that assessment.

2. Shows the table in plan view

173. The screens relied upon are shown at Annex B, page 2. This feature is commonplace. Further, as apparent from those images and as Mr Davies accepted there are numerous differences in the way this commonplace feature has been implemented in the two games. He agreed with all the differences identified in schedule 2, section 2 to Mr Lawrence's report. The aspect ratios of the tables, pockets and balls are quite different, as is the appearance of the tables and all the graphics which surround them.

3. Shows, prior to the shot a short stubby cue which, although moveable under the control of the player, can only move under the control of the player by rotating around the cue ball

174. The screens relied upon are at Annex B, page 3. As to the rotation around the cue ball, the conclusions I have set out in relation to feature (4) in the case of Trick Shot are equally applicable, save that in the case of Jackpot Pool the control is not effected by a rotary controller. Instead the player moves the cue by touching the screen and then uses the "Rotate" graphics to fine tune the shot.

175. As to the "short stubby cue", I have to say that the cues look to me to be very different. In Pocket Money the cue appears quite realistic and has a clear handle. In Jackpot Pool it is much shorter in proportion to the table and has no discernable handle. The difference in proportion was confirmed by Mr Lawrence who was not challenged on this issue.

4. Shows the anticipated direction of the shot by a row of dots extending from the cue ball which does not necessarily show the complete anticipated path of the cue ball

176. This feature is said to be shown in the images appearing at Annex B, page 4. This corresponds to feature (5) in the case of Trick Shot and is, subject to the comments below, present in both the Jackpot Pool and Pocket Money games. The idea was, however, commonplace. Further, in the case of Jackpot Pool the direction of the shot is indicated by nine white crosses as opposed to six white dots in the case of Pocket Money. Moreover, and in contrast to Pocket Money, the crosses in Jackpot Pool do not pulsate. Both Mr Davies and Mr Lawrence agreed that it was desirable to have dots or crosses as opposed to a solid view line to avoid the problem of aliasing.

5. Permit the player to alter the power of the shot by timing of the shot relative to a pulsing power level

177. This similarity is said to be illustrated in the images at Annex B, page 5. It corresponds to feature (6) in the case of Trick Shot. As Mr Davies acknowledged, the use of a power meter is extremely common practice in games design and is an obvious design choice. The two meters have, however, been implemented in totally different ways in terms of

appearance and mode of operation. All these differences, with which Mr Davies agreed, are set out in schedule 2 section 5 to the report of Mr Lawrence.

6. Shows the pulsing power level by an animation cycle in which (i) the cue moves away from and towards the cue ball; and (ii) a bar graphic varies with the power level

178. This feature is said to be shown in the images appearing in Annex B, page 6. It corresponds to feature (7) in the case of the Trick Shot game. It is indeed present in both the Jackpot Pool and the Pocket Money games but the way it has been implemented is visually very different, as is apparent from the screen images on which reliance is placed and the conclusions set out above in relation to feature 5, to which this feature is closely related. Further, the way it operates is also different as the experts agreed. In Jackpot Pool the player first selects the direction of the shot. At this point the power meter is not visible. Then he selects the power and any spin or the like. Further, in Pocket Money the sight line pulses in time with the cue. In Jackpot Pool the sight line does not pulse.

7. Assigns values to each pocket and displays each value in the vicinity of the pocket to which it relates

179. This feature is said to be shown in the images at Annex B, page 7. This feature corresponds to feature (8) in the case of Trick Shot. It is true as far as it goes but the feature is once again cast at such a level of generality that it conceals a considerable set of differences.

180. In Pocket Money the values are shown in the rectangular boxes set into the side of the table. They change after every shot depending on the difficulty of the shot. In the second stage of the game they disappear from the side of the table and appear instead in panels in the centre of the table.

181. In Jackpot Pool, on the other hand, the values in the first round are points rather than cash and appear on hexagonal spinning discs within the pockets themselves. They rotate one position clockwise after each shot. The points do not therefore relate to the difficulty of the shot. If a ball is potted then the value appears to turn into an advantage, such as 'reposition the white ball'. In the second stage of the game the values shown on the hexagons are cash values.

182. Overall, Mr Davies accepted that the way in which values are used in the two games is totally different. Further, Mr Mclean established that the use of values associated with pockets in video pool games was very common.

8. Upon the player potting a particular ball, the words "INSTANT WIN" appear on the screen and the player wins an immediate cash prize of £1

183. This feature is shown in the images at Annex B, page 8. It is not an accurate description of the feature in the Jackpot Pool game. Further the instant win features in each game bear no visual similarity to each other and occur in quite different circumstances.

184. In Pocket Money there are six different start positions. In some it is easier to achieve an instant win than in others. If the player manages to pot the yellow star ball then he wins a special prize. One of these is the instant win. The yellow star ball is present in every game until it is potted but depending upon the initial set up it is sometimes very difficult to achieve. If it is potted and this particular prize awarded then the words “Instant Win” flash across the screen and the machine immediately pays out £1.
185. In Jackpot Pool very occasionally one of the hexagons changes colour and carries a £1 or a £5 sign. At the same time the words Instant Win and a graphic appear in the bottom right of the screen. At this point the player has one chance to win the feature and he does so by potting any ball into that particular pocket. If this is achieved then the value is added to the bank in what is otherwise a points only phase of the game.

9. Upon the player potting a particular ball, it shows an image of money travelling across the screen

186. This feature is shown in the images at Annex B, page 9. As described, it is not a feature of the Jackpot Pool game.
187. The images relied upon in relation to Pocket Money show what happens when a player is rewarded with an instant win for potting the yellow star ball. The player is alerted to his win by the image of a coin falling down the side of the screen into the graphic hopper. The word “collect” appears. The money is then paid out by the machine.
188. In the case of Jackpot Pool an image of a coin falling down the centre of the screen is triggered by the player potting any ball into the pocket showing the cash logo. It is not triggered by the potting of a particular ball as suggested by the alleged similarity. There is no hopper and the word “collect” does not appear. The images are very different to those that appear in Pocket Money.
189. It should also be mentioned that images of coins appear in Pocket Money in a different context. Whenever the player pots a blue ball in the first rack a graphic of coins travels from left to right across the top of the screen and into the purse. The screen images relied upon by Nova do not show this feature and it does not occur on the potting of a particular ball as suggested by the alleged similarity.

10. Provides that extra time can be achieved by making a particular pool shot

190. This feature is shown in the images at Annex B, page 10. Both games do contain an extra time feature.
191. An extra time feature was commonplace. Mr Davies and Mr Lawrence agreed that it appeared in virtually every time based game that they could think of.
192. Further the way it has been implemented in the two games is quite different. In Pocket Money extra time is awarded if the player hits a chequered ball. This appears at an apparently random point (but generally once during the game) and only stays on the screen for a short time. It only has to be hit and not potted. In Jackpot Pool one of the

blue hexagons is very occasionally replaced by a hexagon with an image of a clock appearing in its centre. The player must then pot a ball into that pocket to secure extra time. If he fails to do so then the extra time hexagon disappears and is replaced by one of the regular blue hexagons.

11. Contains an “action replay” feature in which the timer is paused and the previous shot is displayed.

193. This feature is shown in the images at Annex B, page 11. Both games do have such an action replay feature.
194. Once again, however such a feature was commonly found in arcade and video games, as Mr Lawrence and Mr Davies agreed.
195. It is, however, implemented very differently both in terms of graphics and the way it operates. In Pocket Money the machine decides when and if a replay is to be shown. When it does the words “Action Replay” appear in the centre of the screen, the timer freezes and the shot is replayed. In Jackpot Pool the player has the option of viewing an action replay which he exercises by touching the replay button in the bottom right hand corner of the screen. The graphic then illuminates the word “replay”, the timer freezes, an “R” is shown and the shot is replayed.

12. The pool table being a lighter shade of green at the centre than towards the edges as though lit by a central overhead light source.

196. This feature was introduced by amendment at the start of the trial. It corresponds to feature (11) in the case of the Trick Shot comparison. As there explained, it was an overwhelmingly obvious thing to do and was commonplace. Further its implementation is different. It is less obvious in Pocket Money than in Jackpot Pool. Further, the shadows on the cushions are different, as Mr Lawrence explained in his supplemental report.

13. Shows a shadow by each ball which varies with the position of the ball on the pool table as though the ball were lit by an overhead light source.

197. This feature was also introduced by amendment at the start of the trial. Mr Maclean was not challenged that this was a common feature to include in any video pool game and Mr Davies accepted that it was an obvious one to adopt to create a realistic impression.

Originality and design of Pocket Money

198. As I have mentioned earlier in this judgment, Mr Carr attacked the credibility of Mr Jones and Mr Robinson. He submitted that at various points during their evidence they did not tell the truth with the consequence that Nova could not prove that it had title to any of the works relied upon. Further, he submitted, I should not accept the evidence that Mr Jones gave under cross examination that the only games he was aware of when he designed Pocket Money were Video 8 Ball and Video Hustler. As a result, said Mr Carr, I must assume that Mr Jones was aware of the large number of games referred to by Mr

Maclean in his evidence including, specifically, the game called Pocket Gal Deluxe which had all or virtually all of the similarities relied upon.

199. The attack has a number of limbs. First it was said that Mr Jones told a lie about the design of Video 8 Ball, the game launched by Century Electronics in the United Kingdom in 1982. It was common ground that Video 8 Ball and the Video Hustler game sold by Konami are so similar that one must be copy of the other. Mr Jones said that he did not copy Video Hustler with the consequence that Video Hustler must have been copied from Video 8 Ball. It was put to Mr Jones that this could not be true, principally in the light of the following. First, the copyright notice on Video 8 Ball is dated 1982 whereas the copyright notice on Video Hustler is dated 1981. Secondly, Mr Jones admitted that another game issued by Century Electronics at about that time called Logger was a copy of a Nintendo game called Donkey Kong. The copyright notice on Donkey Kong was dated 1981 and the copyright notice on Logger was dated 1982. Thirdly, a warning against copyright infringement in respect of Video Hustler appeared in the trade magazine called Coin Slot on 18 July 1981. In the same issue appeared an article about the launch by Century Electronics of their CVS system and which identified the first two games to be launched on that system as Dark Warrior and Cosmos. Finally, the first advertisement for Video Hustler appeared in Coin Slot on 22 August 1981. Video 8 Ball was not, however, launched in the United Kingdom until 1982.
200. All of these matters were put to Mr Jones during his cross examination without any prior warning. This is not a criticism of the defendants because they only appreciated the close similarity between the games on the eve of the trial. It is, however, a matter which I must take into account in assessing the evidence because these events took place over 20 years ago. Mr Jones was, however, adamant that he did not copy Video Hustler although he accepted that he had copied Donkey Kong. His recollection was that Video 8 Ball was designed in 1981. Further the evidence of Mr Jones was supported by Mr Robinson. He gave evidence that between 25 and 50 copies of the game were sold to Japan in March 1981. Mr Robinson was also subjected to an extensive cross examination but he maintained his position. Further, and in response to the attack, additional disclosure was given and this showed, inter alia, that overseas agreements were being completed in respect of the CVS system in January 1981 and that Konami copied another well known game called Space Invaders.
201. I have not found this any easy matter to decide but have reached the conclusion that I cannot reject the evidence of Mr Jones and Mr Robinson on this point. To do so would involve a finding that they both persisted in telling a deliberate lie. Having heard the witnesses and considered their explanation and all the other matters drawn to my attention I am not prepared to do so. Nevertheless it is clear that Mr Jones was well aware of both games and their features. This has a bearing on the other matters I have to decide. In particular, it is relevant that Video Hustler had a two dimensional portrait representation of a pool table, a pulsing power meter and values associated with the pockets.
202. Secondly, Mr Jones was cross examined about the contents of a letter written by Nova's solicitors dated 18 May 2005. In that letter the solicitors wrote that Mr Jones gave

instructions to various programmers to embody his ideas, who were engaged specifically by the company for that purpose. Yet in his witness statement signed some seven weeks later Mr Jones said that he and no one else had written the code. Under cross examination Mr Jones maintained the position set out in his witness statement although he had no explanation for the contents of the solicitor's letter save that it was an error. In the circumstances it was submitted that I should reject the evidence that Mr Jones gave under oath. I am unable to do so. It seems to me a reasonable possibility that the solicitors did indeed make an error. There is no suggestion that Mr Jones was incapable of writing the code. On the contrary, his evidence was that he was experienced in software design and that he had designed a number of other games. Further, he gave detailed evidence about the design process. Having heard Mr Jones, I accept his evidence on this point.

203. Thirdly, Mr Jones appeared to suggest at various points during his cross examination that he was unaware of the design of other games. In particular, he suggested that he did not play coin operated games, that he only played a flight simulator and that he had not seen any snooker, pool or golf video games. It culminated in his evidence that he had existed "in a kind of bubble" for the last 26 years. In my judgment this evidence was something of an exaggeration. In his witness statement (paragraphs 12 and 13) he explained that in 1999 he had the idea to create an SWP game that rewarded the player's hand eye coordination, rather than the ability to answer questions, which was the norm. He pointed to what he saw as the deficiencies of the other SWP games on the market and, in particular, that to his knowledge no game on the market combined the hand eye requirements of a traditional video game with the cash prizes of an SWP game. Accordingly, he said, Nova developed the game called "Pharaoh's Gold". Further, in paragraph 64 he suggested that, to his knowledge, the "extra time" feature was unique to Pocket Money and that this had been copied by Mazooma. These references indicate that, as one would expect, Mr Jones did have an awareness of the state of the market. Under cross examination he accepted that when considering the design of a new game it was important to be aware of what else was on the market. Further, he was plainly aware of Video Hustler and accepted that he had copied Donkey Kong. He also accepted that over the years he had seen lots of video games with power gauges. In the light of all these matters I conclude that Mr Jones was aware of what was generally available on the market. I am not, however, persuaded that Mr Jones was aware of all the games to which Mr Maclean referred in his evidence. Mr Maclean's knowledge was immense. Further, I am not persuaded that Mr Jones was aware of Pocket Gal Deluxe. That was a game which Mr Maclean himself did not find until shortly before the trial, although he was certainly aware of earlier versions. I am also conscious of the fact that from 1985 until 1999 Mr Jones did not design a game that required hand eye coordination. Nevertheless, in the light of all the evidence, I conclude that it was more likely than not that Mr Jones was aware of the features that I have found were commonplace at the time of the design of Pocket Money. He was also aware of the features of Video 8 Ball and Video Hustler.

The design of Trick Shot

204. A number of witnesses gave evidence about the design of Trick Shot. They were cross examined very closely.

205. As I have mentioned earlier in this judgment, Bell-Fruit was aware of Pocket Money by August 2002, at the latest. Mr Daniels, the Chief Executive of Gamestec, was interested as to how the game provided the necessary skill requirement to qualify as an SWP game. He suggested that Mr Farrell, the Bell-Fruit Games Design Director, should look at it to see if it might be useful for Bell-Fruit's SWP development. As a result Mr Malt, a games designer employed by Bell-Fruit (and who went on to become the lead product designer or product champion of Trick Shot) was sent to play the game at the Cue Lounge bar in Nottingham early in September 2002. He reported back that he had seen and played the machine and an e mail from Mr Wain, a consultant to Bell-Fruit, records that Mr Farrell was considering a possible similar Bell-Fruit approach. Mr Malt, who gave evidence before me, also explained that he played the game on a further occasion at the Cue Lounge bar and at the AMOA show in Las Vegas in September 2002.
206. I am satisfied that Mr Malt was impressed by Pocket Money and had a good recall of its features when he came to design Trick Shot. He acknowledged that he recalled the rotary controller, power meter, timer and buttons and that these were familiar to him from other applications. He also discussed the details of the game with a Mr Padwick, another designer employed by Bell-Fruit. Mr Padwick was the product champion of an SWP game which Bell-Fruit began to design in the summer or Autumn of 2002 called "Pot Shot". This was the "possible similar approach" to which Mr Wain referred in his e mail and was Bell-Fruit's response to the success of Pocket Money. Ultimately, Pot Shot was never launched and is not the subject of any complaint in these proceedings.
207. The design of Trick Shot began in early April 2003 and, as I have indicated, Mr Malt was its product champion. In addition, I heard evidence from Mr Fink, a graphic artist, Mr Stewart, a video graphic designer, and Mr Willmer, a video software engineer and programmer.
208. The design process for Trick Shot may be summarised as follows. Mr Malt was asked to come up with the design of a new AWP game. He first had the idea of incorporating a video screen into the game, an idea which he carried forward from an earlier game called Cop the Lot. Consideration was then given to the theme. Golf, pool and snooker were all canvassed as possibilities but Mr Malt favoured pool. He accepted that Pocket Money may have been an influence but he was also conscious that Mazooma had recently released Jackpot Pool and that pool was a very popular game in pubs and had been used successfully as a theme for many electronic video games in the past. Mr Fink (who had never seen or played Pocket Money) produced some initial designs and a cardboard mock up was produced for discussion at a meeting of the main company game design team. It was accepted and the main process of game design began.
209. At this point it is convenient to deal with an attack on the credibility of Mr Malt. It was said that he not a satisfactory witness and that he concealed the true extent of the influence of Pocket Money on his design work. Reliance was placed upon the following points. First, the response to the letter before action against Bell-Fruit did not mention that Mr Malt was sent to look at Trick Shot in the Cue Lounge bar although it did mention Las Vegas. Further, it did not mention that Mr Malt sent Mr Willmer out to look at the game in a public house in May 2003. I do not think there is anything in either of

these points. The witness statement of Mr Malt was completely clear on both matters and he did not attempt to conceal them in any way during the course of cross examination.

210. Secondly, it was said that Mr Malt sought to bolster his evidence about other sources of influence on his design by purporting to remember during the course of his evidence in chief a number of the games referred to by Mr Maclean when in fact he could do no such thing and further, by concocting a story that he carried out an internet search at the time he began the design process and as to its contents. Again, I am not persuaded by these points. As to the games referred to by Mr Maclean, Mr Malt did give the impression during his evidence in chief that he remembered a number of these games from a time before the design of Trick Shot, but he accepted in cross examination that he could not be sure that this was so and that he might have seen them more recently. As to the internet search, he did not retain the results of that search and so he explained in his witness statement that he carried out a similar search and annexed examples of the types of games he would have played although, at the date of his statement, he could not recall them. It is true that that the exhibit contains a number of pages derived from different sources and that Mr Malt was somewhat unclear in his evidence as to the origins of the exhibit. Nevertheless, having heard his evidence, I am satisfied that Mr Malt did do an internet search at the time of the design. It seems to me that this is a perfectly natural step for a designer of a video computer game to take and Mr Malt was unshaken that he had carried out such a search. Indeed, I think it would be somewhat surprising if a designer did not take steps to familiarise himself with the games on the market.
211. Overall I have reached the conclusion that Mr Malt was an honest witness. Further, I have no doubt that, from the outset of his design, Mr Malt was aware of the features of the video games that I have concluded were commonplace.
212. Once the project had been given approval, Mr Malt prepared a concept document. The initial version was dated 10 April and it was closely based upon the previous Cop the Lot game. It contains the ideas of over sized pockets because Mr Malt wanted the game to be easy to play and values next to the pockets as a direct replacement for the equivalent feature in Cop the Lot, although Mr Malt accepted that, with respect to values, Pocket Money could have had some influence on him. He also recorded a number of other possible ideas to do with extra shots, potting the white ball and skull balls. The first two referred to thoughts that extra time might be needed and that he needed to sort out what to do if the white ball was potted. The last idea was something that Mr Malt had in mind from an earlier game called “Wiggle” as a possible way to terminate the game although he also accepted that he might have included it because it appeared in Pocket Money. In the event, however, it did not become a feature of the game.
213. The concept document goes on to refer to a dial to rotate the cue and shoot button to gain the required power. Under cross examination Mr Malt accepted that, by this stage, he had the idea of a cue pulsing in time with the power meter although, in his witness statement, he explained that he believed he did not give the idea to Mr Willmer who implemented the software. He did, however, accept in his witness statement and under cross examination that the idea of a rotary controller was influenced by Pocket Money.

214. The document also refers to “six red balls strategically placed” which Mr Malt accepted might have been influenced by Pocket Money, although the game was not ultimately developed this way. Over the course of May to July 2002 seven versions of the game concept document were prepared as the game gradually developed.
215. The basic video graphics were prepared by Ian Stewart. He worked from Mr Fink’s initial artwork and, like Mr Fink, had never seen or played Pocket Money. He produced the design of two dimensional table layout, pockets (although Mr Malt asked that they be made slightly larger) pool balls, cue and a green background. Mr Malt asked him to draw a power meter, which he did using his own ideas and to add a feature/value graphic to the pockets, which again he did using his own design ideas. Mr Stewart also conceived and designed the central lighting feature. I am satisfied that none of the work originated by Mr Stewart was influenced in any way by Pocket Money.
216. The following further points arising from Mr Stewart’s evidence are notable. First, Mr Stewart wanted the design of the table to be cartoon like and as big, bold and fun as he could make it. Second, when Mr Malt asked Mr Stewart to draw a cue he assumed that it would have to rotate around the cue ball because that is how all the games he had seen worked. Third, Mr Stewart had no difficulty drawing a power meter because it was something he had implemented before and was very familiar with time bars and power meters.
217. As the design developed Mr Willmer began to develop the software. It was suggested that Mr Willmer was an “uncomfortable” witness. I reject that suggestion. He gave his evidence frankly and honestly.
218. Mr Willmer was new to the games industry and so Mr Malt sent him to the local public house to look at Pocket Money. Mr Malt explained, and I accept, that this was not to get ideas as to the game play, because this was something that he, Mr Malt, was responsible for, nor to get ideas as to graphics, because these were being designed by Mr Stewart. Rather it was to get an impression of the programming quality he was seeking to achieve. Mr Willmer understood it was to get an idea of what an AWP or SWP game looked like and to create a good looking game which was attractive to players. He spent about 20 minutes there.
219. Mr Willmer had a good deal of work to do. He wrote the software for the pool table, the interaction of the balls and the interaction of the balls and the cushions. At about this time he did an internet search to get an idea of the visual appearance of other video pool games. He then began to integrate the graphics and he had to ensure that the whole game played as a fruit machine. The whole programme of work took around four months.
220. Mr Willmer had the idea of sight lines at a very early stage of his work. As soon as he got the balls colliding he introduced sight lines because he needed to have some way of indicating the direction of the ball and because, at that stage, he did not have a cue. He drew the graphics for the crosses himself. He also explained, and I accept, that he had seen the idea in other earlier games. When he saw Pocket Money he noticed that the sight lines pulsed and recalled thinking that “there was too much going on”. He originally

coded the lines so that the player would see the path of the ball bouncing off the cushion but removed this feature because it made the game look too easy.

221. Mr Willmer also gave evidence as to the idea of a power meter and pulsing cue. In paragraph 39 of his witness statement Mr Willmer explained that there had to be power meter to adjust the power of the shot. This was a feature he had seen in many games over the years and he could not think of any other straightforward way of adjusting the power. In paragraph 25 he said that a pulsating power meter was one of the options he was considering by the time he played Pocket Money. He also explained in his statement that initially he coded the cue to be static but that Mr Malt suggested that it move. The only sensible thing to do then was to make it move in time with the power meter. He did not believe that the idea came from Pocket Money but accepted that it was possible. Under cross examination Mr Willmer accepted that Mr Malt might have mentioned the idea of a pulsing timer and then to hit a button at the right time to hit a shot. He also said he did not know if the power meter was in the game at the time he played Pocket Money but that there was a good chance that it was because it was the easiest way he could think of setting the power.
222. In January 2004 Mr Malt prepared the concept document for the round top version of Trick Shot. This referred to a development, namely that the value on the pocket would change after every shot, with higher values placed next to pockets that were more difficult to pot. In the event this was implemented rather differently. In the game as released, the value associated with a pocket relates to the distance it is from the cue ball. In cross examination it was suggested to Mr Malt that he must have had the feature of Pocket Money in mind. He did not accept that suggestion. He explained that it was a simple and obvious thing to do and that if he had never seen Pocket Money he would have done exactly the same thing.
223. Before setting out my conclusions in respect of each of the features of similarity relied upon I would make the following further general observations. I have well in mind that Pocket Money was and was known to be a very successful SWP game. Further, I also have well in mind that Mr Malt, from the outset, and Mr Willmer, from the time of the visit to the public house, were familiar with Pocket Money and its features. In the light of these matters was submitted by Mr Howe that these designers must inevitably have been influenced by Pocket Money. Conversely, however, a number of the features upon which reliance is placed were commonplace and obvious ones to adopt. Further, the features have in every case been implemented very differently and implemented into games which play very differently. This case is by no means one in which it can be said there has been any slavish copying, even of ideas. Far from it, the Trick Shot game has obviously been the subject of considerable independent creative effort.
224. In the light of all of the evidence I have reached the following conclusions as to the design of the features of similarity relied upon. As to feature (1), the general idea of a designing a game based upon the theme of pool was, in part, inspired by Pocket Money. Features (2) and (3) were not derived in any way from Pocket Money. As to feature (4), the idea of a rotary controller was inspired by Pocket Money but the movement of the cue around the cue ball was not derived from Pocket Money. It was a commonplace feature

which Mr Stewart assumed would have to be incorporated. Feature (5) was not derived from Pocket Money; a visual indication of the direction of the shot was a commonplace idea and the manner of implementation was the independent work of Mr Willmer. As to feature (6), I have not found this easy to determine. However, having considered the evidence of, in particular, Mr Willmer and Mr Malt I have reached the conclusion that the idea of a pulsing power meter was probably not derived from Pocket Money. It was a commonplace and obvious idea and one with which Mr Malt was already familiar. Mr Willmer had also seen the feature in many games over the years and considered it the straightforward way to adjust the power. Feature (7) involves the idea of synchronising the pulsing power meter with a pulsing cue. In the light of the evidence of Mr Malt and Mr Willmer I have reached the conclusion that this idea probably was derived from Pocket Money even though it was one of the obvious ways to implement the idea of having a pulsing power meter in a pool game. The general idea of feature (8) was inspired by Pocket Money, although it has been implemented very differently. The general idea of feature (9) as reflected in the concept document was originally inspired by Pocket Money but it was not implemented in any game except, arguably, “Hidden Features”. In this game its implementation is so different that, for all practical purposes, I conclude it was not derived from Pocket Money. Further, this game does not have feature (8). Feature (10), the use of the name “Trick Shot”, was not shown to be derived from Pocket Money and is a very popular term in the world of pool and snooker. Feature (11) was not copied.

225. Finally as to feature (12), this was not introduced into the proceedings as a particular of similarity until the end of the trial. As a result, Bell-Fruit did not have an opportunity to deal with it in its expert evidence or to cross examine Nova’s witnesses. These were all matters which Mr Howe, on behalf of Nova, accepted I must take into account in assessing this feature. In the light of all these matters I have reached the clear conclusion that I must accept Mr Malt’s evidence. This feature was not derived from Pocket Money.

Design of Jackpot Pool

226. I heard detailed evidence on the conception and design of Jackpot Pool from Mr Wilson, the Managing Director of Mazooma, Mr Burns, the Operations Director, and Mr Starling, the game designer.
227. Mr Wilson first saw Pocket Money at the ATEI show in January 2002. He saw it again at the AMOA exhibition in Las Vegas in September and at the October London Preview Show. This led him and Mr Burns to identify a gap in the market for this kind of game in terminal form. He discussed with Mr Burns and his other designer colleagues snooker, billiards, pool, golf and football and settled on snooker, pool or billiards and told them to get on and consider ideas.
228. Shortly after, Mr Starling arrived at Mazooma looking for a job. He had considerable software games design experience in the personal digital assistant field and was hired and given the job of designing the new SWP game. Within a relatively short space of time Mr Wilson looked at the initial game ideas and decided that pool was the way forward.

229. Mr Starling began by plotting the coordinates of the pool table and ensuring that the table size and orientation were correct and started to work on the interaction of balls and cushions. At a relatively early stage he did an internet search and evaluated a number of personal computer based games. In particular he played games called Masse Club, Versee Esnuka, Java Boutique and Cue Club. He recalled that he had played over the years many games that had power meters and dotted lines to indicate the direction of the shot. If he did not know them already, I am satisfied that by the time Mr Starling set about the design of Jackpot Pool he was aware of all the features which I have found were commonplace.
230. By the beginning of December he had a functioning piece of software with wire frame table of size to fit the screen, interacting balls, a pulsing power meter and dotted lines that rotated around the cue ball to the target. There were two ways of controlling the power, one involved the clicking of a meter and the other clicking on the table at the correct time relative to the pulsing power meter. A pulsating power meter was something that Mr Starling intended to include from very early on and was derived from years of playing games.
231. In early December Mr Wilson and Mr Burns arranged for Pocket Money to be brought into the office where it stayed for five or six days. Mr Starling played the game solidly for one day and reached the conclusion that it was not sufficiently skill based. He wanted to produce a game which was more realistic. He recalled finding the level of control obtained by the rotary controller impressive.
232. Under cross examination he accepted that he definitely noticed other aspects of the game. In particular, he limited the length of the line of dots of the sight line having seen Pocket Money and he also noticed the combination of cue, line of dots and cue pulsing in and out in time with the power meter. He accepted that having seen the game he “tied the features that I already had in my mind into the game” and that this “solved all the problems”.
233. Mr Starling explained that assigning values to each pocket was not derived from Pocket Money. As a skill with prizes game the player had to be given the opportunity to win money and so values had to be included in the game. Rotation of the prizes around the table was an idea derived from Mr Burns and Mr Wilson who wanted a strategy based game where the prizes rotated to give the player an opportunity to plan the shots ahead.
234. As to “Instant Win”, Mr Starling accepted that he would have seen the words in the “attract mode” but could not recall having achieved an Instant Win.
235. As to coins travelling across the screen, he accepted that he would have seen coins going across the screen into the purse when a ball is potted and that he would have seen the coins travelling down the screen at the end when the purse is won. It is to be noted, however, that he could not have seen the images relied upon in the particulars of similarity unless he had achieved an Instant Win and this was not, to my mind, established. Further, it is notable that in Jackpot Pool the image of a coin travels down the screen either when an Instant Win is awarded or when the player achieves a £5 win.

236. As to the extra time feature, Mr Starling accepted that he would have seen this in Jackpot Pool but that any game against the clock would have such a feature. In his witness statement he explained, and I accept, that this was a standard feature in almost all the arcade games that he had played and that he and Simon Rawicz, another designer who assisted in the production of the graphics, decided to include it to make the game more interesting.
237. As to the action replay feature, Mr Starling was clear, and again I accept, that he adopted this feature because it was something he had seen on television.
238. As to the central lighting and the shadows under the balls, Mr Starling explained that he did this to re-create how tables are lit in real life. Once again I accept this evidence.
239. The other features relied upon can be dealt with quite shortly. The table in plan view was all that Mr Starling felt capable of doing and it was a feature of virtually every pool game he had played in the past. The idea of a cue was introduced because a line of dots on its own sometimes led to confusion. Many of the earlier games he had seen had a cue, and touch screen rotation around the cue ball was used because it was the most obvious way of achieving the necessary 360 degree access to the cue ball to make the shot and was a feature of virtually all the pool and snooker games he had played. They settled on particular design of cue which could be rotated quickly enough by the software.
240. In the event the game was largely in working order by Christmas and ready for the ATEI show as requested.
241. In reaching my conclusions on this evidence I have had in mind the same sort of considerations set out in paragraph 223 above in relation to Trick Shot. There is no doubt that Mr Starling had Pocket Money in front of his nose at an important time in the development of the game. He played it more than any other game during the design process. It was the most comparable game and a yardstick against which his game was compared. I also have in mind the difficulty of trying to reconstruct where any particular idea came from, particularly bearing in mind the fact that Mr Starling accepted that Pocket Money did influence him in deciding to shorten the length of the line of dots in the sight line. At the end of his cross examination Mr Starling was specifically asked about this and the combination of features introduced after he had seen Pocket Money, namely the rotating cue and the synchronised pulsation of cue and power meter, the line of dots of limited length, the shadows and lighting effects, the assigning of values to pockets, the instant win feature, the moving coin graphic, the extra time feature and the action replay. Mr Starling said that he believed that if he had not seen Pocket Money most of the features, if not all of them, would still have been incorporated. A little later, in an answer upon which Mr Howe particularly relied, he said he did not know how he could say that he was not influenced by Pocket Money. Again, however, I must also take into account Mr Starling's earlier evidence in which he explained that he was already familiar with particular features, how commonplace or obvious they were and how they have in fact been implemented. He was, in my judgment, doing his best throughout to grapple with the difficulty of reconstructing the design process. He gave his evidence honestly and fairly.

242. In the result my conclusions in the light of the evidence may be summarised as follows. Feature (1) was inspired by Pocket Money. Features (2) and (3) were not derived in any way from Pocket Money. Feature (4) was affected by Pocket Money but only to the extent that it led Mr Starling to shorten the row of dots. Feature (5) was not derived from Pocket Money. Feature (6) was derived from Pocket Money in the sense that it contributed to the decision by Mr Starling to synchronise a pulsing cue with the pulsing power meter. Features (7) and (8) were not derived from Pocket Money. As to feature (9), this is not, as pleaded, derived from Pocket Money. However, I think it likely that the idea of showing a coin graphic moving across the screen at different times during the game play probably was inspired by Pocket Money. Features (10), (11), (12) and (13) were not derived from Pocket Money.

Reproduction of a substantial part – Trick Shot

243. I have concluded above that features (1), (4), (7), (8) and (9) were, at least to some extent, derived from or inspired by Pocket Money. It is now necessary to consider whether this means that a substantial part of any copyright work has been reproduced. This issue must be considered separately in respect of each class of copyright work relied upon.

Artistic works

244. I have set out above the general principles which I must apply. In addition it is necessary to have in mind that a cluster of inter-related features may be considered together. They may contribute to the production of an overall effect. One must be careful not to engage in over dissection; the copied features must not be dealt with separately if they combine together to produce a cumulative effect. At the same time, however, it is important to remember that the copied features must be considered in relation to each copyright work relied upon. There will only be infringement if a substantial part of any such work has been taken.

245. I considering this question I am prepared to assume, as Mr Howe invited me to, that “in time” movement of the cue and meter must be considered as being reflected in a series of still shots and like must be compared with like. Nevertheless, I have reached the clear conclusion that there has not been a reproduction of any artistic copyright work for all the following reasons. First, the rotary controller is not part of any copyright work. This feature must therefore be put on one side. Secondly, features (7), (8) and (9), so far as they ever appear together, have been implemented quite differently in each of the two games. The appearance, colour and positioning of the pulsing power meter, the values associated with the pockets and the placement of balls over the pockets are quite different. The graphics of these features in the two games are quite different. This is apparent from the images set out in the Annex to this judgment and which I have commented upon in detail in considering each of the features of similarity relied upon. Thirdly, the relevant features are expressed at a very high level of generality or abstraction. To my mind they have only been taken to the extent that they represent ideas with no meaningful connection with the artistic nature of the graphic works relied upon. Fourthly, feature (7) is a dynamic characteristic of the game. It is only represented in any particular frame to the extent that there is a spatial relationship between the cue and the

colouring of the meter. Overall, I have been left with the clear impression that Bell-Fruit has not appropriated a substantial part of the artistic skill and effort expended by Mr Jones in producing any of the Pocket Money graphic works.

Literary works – the program and design materials

246. As I have indicated, it is not suggested that Bell-Fruit had access to or copied the computer program or the preparatory design materials for that program directly. Rather, it is Nova's case that Bell-Fruit has infringed by programming its computer to produce similar effects. Bell-Fruit, it was submitted, has taken advantage of a substantial part of the original skill and labour expended by Mr Jones in devising the appearance and operation of the game.
247. I have reached the conclusion that Nova's claim in relation to these works must also fail. Similarities (7) and (8) and (9) consist of the ideas of having a cue move in a synchronised manner with the pulsing power meter, values associated with the pockets and having the balls spaced in a specific pattern relative to the pockets. Further, the last two elements do not appear together in the same game. They are cast at such a level of abstraction and are so general that I am quite unable to conclude that they amount to a substantial part of the computer program. They are ideas which have little to do with the skill and effort expended by the programmer and do not constitute the form of expression of the literary works relied upon.
248. Further, application of the principles explained by Pumfrey J in *Navitaire* leads to the same conclusion. Nothing has been taken in terms of program code or program architecture. Such similarities that exist in the outputs do not mean that there are any similarities in the software. Further, what has been taken is a combination of a limited number of generalised ideas which are reflected in the output of the program. They do not form a substantial part of the computer program itself. Consideration of Article 1(2) of the Software Directive confirms this position. Ideas and principles which underlie any element of a computer program are not protected by copyright under the Directive.
249. Nova faces the same general difficulty in relation to the preparatory design materials. However, here the position is even worse. They comprise a series of jottings and ideas. There are no sketches which look like the screens alleged to have been copied. Further, key features upon which reliance is placed are not shown or described at all. There is no depiction or description of a pulsing power meter (although there is a picture of a power meter), a pulsing cue (although there is picture showing the cue close to and drawn back from the ball), synchronisation of the cue with the power meter, balls positioned over pockets, limited length of the row of dots of the sight line, instant win, action replay or shadow effects. These features are not just ideas expressed at a high level of abstraction; they are ideas which are not embodied in the preparatory design materials.
250. I should note that I heard argument as to whether the full reasoning of Pumfrey J in *Navitaire* applies to preparatory design materials, just as it applies to computer programs. However, in the light of my conclusions it is not necessary to explore this issue further and I prefer not to express a conclusion upon it.

Reproduction of a substantial part- Jackpot Pool

251. I have concluded that features (1), (4), (6) and (9) were, at least to some extent, derived from or inspired by Pocket Money. As in the case of Trick Shot, I must now consider whether this means a substantial part of any copyright work has been reproduced.

Artistic works

252. I can state my conclusions quite shortly. They are similar to those I reached in relation to Trick Shot. The line of dots is different in the case of the two games and in Jackpot Pool it does not pulsate. All that has been taken is the idea of making the line stop short of the target on longer shots. The synchronisation of the power meter with the pulsing cue is also quite different. The power meters have very different appearances and the sequence of operation is different, as I have explained above. All that is taken is the idea of synchronising a pulsing cue with a pulsing power meter. Finally, the images of coins moving across the screen also look very different. Taken together or separately, these features do not amount to a substantial part of any artistic work. They are ideas at a high level of abstraction and have no meaningful connection with the graphic works relied upon.

Literary works – the program and design materials

253. Once again I have reached the clear conclusion that the claim must fail for like reasons to those expressed in relation to Trick Shot. The ideas that Mazooma have taken have nothing to do with the skill and effort expended by the programmer. They do not constitute the form of expression of the computer program for Jackpot Pool. They are generalised ideas at a high level of abstraction. The features taken collectively or separately do not amount to a substantial part of the program. Similarly, they do not amount to a substantial part of the preparatory design materials. Indeed, as I have explained, the limited length of the row of dots of the sight line and the synchronisation of the pulsing cue with the pulsing power meter are not represented in the preparatory materials at all.

Conclusion

254. For all the reasons I have given I conclude that both actions fail.