

## **PATENTS ACT 1977**

IN THE MATTER of  
patent application  
GB 0221440.1 in the name  
of Mikhail Petin

### **DECISION**

#### **Background.**

- 1 Patent Application number GB 0221440.1 entitled “New and improved world calendar” was filed by Mr Mikhail Petin on 16 September 2002. An Official letter was issued on the 30 September 2002 requesting a Form 9/77 and one or more claims to be filed. On 17 October 2002, Forms 9 & 10/77 were filed but without any claims. Claims, 102 in total, were subsequently filed on 23 October 2002 together with a request for mistakes in Figs 1 & 4A to be corrected.
- 2 An Official letter dated 2 December 2002 was issued asking for a Form 11/77 to be filed if the corrections were to be undertaken before publication. This form and the corresponding fee were filed on the 16 December 2002. The correction request was considered within the Private Applicant Unit and an Official letter issued on the 20 January 2003 agreeing to correction of Fig 4A but not Fig 1 because no evidence could be found in the original description to support the requested correction. In this letter, the Examiner raised doubts regarding the patentability of the subject matter of the application.
- 3 At this stage the application was passed to a Senior Patent Examiner for Combined Search and Examination. The Examiner took the view after a preliminary consideration of the application that there was nothing patentable within the application. Accordingly, prior to search and examination, an Official letter was issued on the 16 April 2003 objecting that the invention did not appear patentable under one or more of the prohibitions of Section 1 (2) of the Patents Act, 1977. The applicant was offered a refund of his fees if he requested withdrawal of the application before search and examination.
- 4 The applicant responded in a letter dated 20 April 2003 disagreeing with the objections and asking for reconsideration. The examiner responded with further detailed arguments as to why the application was not patentable. In particular, the examiner repeated his objection that the invention appeared to be a mathematical method and thereby excluded by virtue of section 1(2)(a). He also pointed out that a similar calendar had been published on the World Wide Web (<http://webcenter.ru/~lingmiz/index.htm>) by the applicant before 1 February 2002, this being before the priority date of the application (16 September 2002). In this respect he quoted the Manual of Patent Practice paragraph 1.17 and argued that the differences between the invention and the calendar published on the World Wide Web are of an intellectual rather than technical nature.
- 5 The applicant responded in a letter dated 15 May 2003 still arguing that the application contained new and patentable subject matter and asking for a hearing. Accordingly the

matter came before me at a Hearing on 17 June 2003 which was attended by Mr Petin who was unrepresented, and by Mr Petin's wife, Ms Z Lioudmila, who acted as an interpreter for Mr Petin who is Russian and speaks English only to a limited extent. Also present was Mr David McMunn, the examiner. References in this decision to things said by Mr Petin were said through Ms Lioudmila. I explained to Ms Lioudmila that it was important that she should say so immediately if she thought I had not understood her or that she had not understood me. I am confident that my appreciation of Mr Petin's case was not affected by the need for interpretation.

### **The Application**

- 6 The application relates to a replacement calendar for conventional Gregorian or Solar based or lunar cycle based calendars. Rather than having a calendar of 365 days with a further day every leap year, the calendar is based around a modified Meton cycle which repeats every 19 years and this calendar requires further corrections for the 76 year Kalipp cycle and the 304 year Gipparrh cycle.
- 7 Mr Petin's current calendar (hereinafter called Petin II ) uses a seven day week with days labelled Monday to Sunday, a four week month with the months being labelled 1 to 12; there being an additional month labelled 0 (zero) between months 12 and 1 every 2, 5, 7, 10, 13, 15 & 18 years of the Meton cycle. In this calendar the months have alternating 30 and 29 days starting with month 1 and with the first day of every month being a Monday. Where necessary, extra Sundays are added (ie two consecutive days named as Sundays) to ensure that the first day of the month is a Monday. Month 12 has 29 days except in years 3, 8, 12 & 17 when it has 30 days. The additional month when provided has 30 days.
- 8 Mr Petin's original calendar as published by him on the internet (herein referred to as Petin I ) was also based on the 19 year Meton cycle, uses 7 day weeks with the days labelled Monday to Sunday, a four week month with the months labelled 1 to 12 normally with a further month labelled 0 (zero) inserted between months 6 & 7 in years 2, 5, 7, 10, 13, 15 & 18 of the Meton cycle. The months, again are alternating 30 and 29 day months. In this calendar, the first day of every month is arranged to fall on a Sunday with additional and concurrent Sundays being added where necessary to ensure this happens. Month 7 has 29 days except in years 2, 7, 13 & 18 when it has 30. The additional month when provided has 30 days.
- 9 Both Petin I & II make corrections for the Kalipp & Gipparrh cycles but at different points. Petin II has month 12 as 29 days in the 75<sup>th</sup> year of the Kalipp cycle and 29 days in year 298 of the Gipparrh cycle as drafted. ( 36<sup>th</sup> & 150<sup>th</sup> as requested in the correction). Petin I has month 7 being 29 days in the 75<sup>th</sup> year of the Kalipp cycle and 29 days in the 298<sup>th</sup> year of the Gipparrh cycle.
- 10 So, Petin II for each 19 year cycle has eight 354 day years, four 355 day years and seven 384 day years. For Petin I, each 19 year cycle has twelve 354 day years, four 385 day years and three 384 day years. Both adding up to 6940 days in total - as does 19 years of the Gregorian Calendar.

### **The Claims**

- 11 There are 102 claims with claims 1, 38 & 66 being independent and claiming, respectively, a calendar per se, a machine readable medium and an electronic unit and read as follows:

*Claim 1*

*The World calendar for organizing 19-year cycles, each cycle comprising: eight 354-day years, and four 355-day years, and seven 384-day years.*

*Claim 38*

*A machine readable medium storing in electronic form the World calendar for organizing 19-year cycles, each cycle comprising: eight 354-day years, and four 355-day years, and seven 384-day years.*

*Claim 66*

*An electronic unit, comprising a machine readable medium storing in electronic form the World calendar for organizing 19-year cycles, each cycle comprising: eight 354-day years, and four 355-day years, and seven 384-day years, and a processor for accessing at least a portion of said calendar*

They all have in common that they relate to a calendar based on a 19 year Meton cycle and having 8 x 354 day years, 4 x 355 day years and 7 x 384 day years.

- 12 The independent claims appear to be claiming respectively, a method of making a yearly calendar either based on a mathematical method or on rules for generating such a calendar, a machine readable medium either containing a program for generating such a calendar or a calendar so generated and an electronic unit either containing said program or a yearly calendar so produced.

**The Law.**

- 13 The examiner has objected that the invention is not patentable by virtue of Section 1 (2) of the Patents Act 1977 in that it appears to be a mathematical method and that if it is established that it is not a mathematical method, then it would appear to be the presentation of information. He has further objected that the differences between the invention and Mr Petin's calendar as published on the internet are intellectual rather than technical. The relevant part of Section 1 reads as follows:

14 **Section 1(2)**

*It is hereby declared that the following (among other things) are not inventions for the purposes of this Act, that is to say, anything which consists of -*

- (a) *a discovery, scientific theory or mathematical method;*

- (b) *a literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever;*
- (c) *a scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer;*
- (d) *the presentation of information;*

*but the foregoing provision shall prevent anything from being treated as an invention for the purposes of this Act only to the extent that a patent or application for a patent relates to that thing as such.*

### **The Hearing**

- 15 At the start of the Hearing, Mr Petin asked if he could give me some papers in which he had set out responses to the objections to his application. Given the circumstances, particularly Mr Petin's limited ability to speak and understand English, I agreed to accept these documents and I assured Mr Petin that I would take account of their contents in reaching my decision. These documents are open to public inspection on the application file. Having considered these papers I find that they largely repeat arguments set out in Mr Petin's earlier letters to the Office, which I have also carefully considered.
- 16 After some preliminary discussion of procedure to ensure that Mr Petin understood what would happen at the hearing and subsequently, Mr Petin indicated that he would prefer the examiner, Mr McMunn, to open by re-stating the objections. In doing so, Mr McMunn repeated that to be patentable an application has to be both new and inventive and not fall within one of the exclusions set out in Section 1(2) of the Act. Mr McMunn referred specifically to Section 1(2)(a) which excludes a discovery, scientific theory or mathematical method and expressed the view that Mr Petin's invention appeared to be a mathematical method for creating a calendar. Mr McMunn pointed out that such a mathematical method may be patentable if it produces a technical effect but that he did not consider such an effect to be produced in this case. He expressed the view that Mr Petin's calendar does what all calendars do, it organises and illustrates days, months and years and that this is not a technical effect.
- 17 In reply Mr Petin disagreed with this view. He said that his calendar is unique in that it synchronises both solar and lunar cycles and arranges the dates such that they will always fall on the same day of the week. Each month will begin with a Monday and correspond to the new moon, and the 15<sup>th</sup> of each month will always correspond to the full moon. He said that no other calendars have this organisation. He argued that no mathematics are involved in devising his calendar.
- 18 I explained to Mr Petin that we were not considering the merits of his invention but whether or not it was patentable within the terms of the Patent Act. I reminded him that it appeared to the examiner that his calendar was the product of a mathematical method and as such was not patentable. I suggested to Mr Petin that it would help if he could explain how his calendar was produced.

- 19 Mr Petin repeated that no mathematics are involved and that his calendar is an informational device not a mathematical method. At this point I reminded Mr Petin of an objection that had already been raised in an Official letter, namely that an additional exclusion under Section 1(2)(d) is the presentation of information and that his explanation may well indicate that even if a mathematical method is not involved, his invention may still be excluded. Nevertheless on a number of occasions Mr Petin referred to his calendar as an informational device. To explore this point further I put it to Mr Petin that in devising his calendar it was necessary for him to take account of certain parameters such as the fixed solar cycle and lunar month and the length of a day and that he was constrained by these natural intervals and had to work within them when organising his calendar. I suggested that in doing this he was performing calculations. In response Mr Petin did not agree that this involved calculation but repeated that he had synchronised the various cycles, day, lunar month, years etc. Mr Petin went on to say that both the Julian and Gregorian calendars did involve calculations but that his did not.
- 20 I then referred to the need to insert extra Sundays in the calendar to ensure that the first day of the month always falls on a Monday. In the example given to me by Mr Petin an extra Sunday is inserted in the month such that the 14<sup>th</sup> and 15<sup>th</sup> days of the month are both Sundays. I asked how he decided that it should be these two dates rather than say the 22<sup>nd</sup> and 23<sup>rd</sup>. As I understood his answer, it is not necessary to choose the 14<sup>th</sup> and 15<sup>th</sup> and that in a variant of the calendar the 15<sup>th</sup> and 16<sup>th</sup> are chosen but that in that case the first day of the month will be a Sunday and the 13<sup>th</sup> day will always be a Friday. Mr Petin rejected that arrangement because he foresaw possible religious and superstitious objections.
- 21 This line of questioning was pursued for some time in an attempt to clarify the method Mr Petin used to devise his calendar. Mr Petin repeated his insistence that no calculations or mathematical method was involved. I am sure that this is how Mr Petin sees it but I need to decide whether the production of the calendar involves a mathematical method within the meaning of the Act.
- 22 I have considered carefully everything Mr Petin said at the hearing and the documents which he provided. Mr Petin appears to have set himself the task of producing a calendar which synchronises what he refers to as “the phenomena of nature ie, the cycles of days, lunar months, solar years, Meton cycle etc”, such that among other things the resulting calendar will always start on the same day of the week and the phases of the moon will also always fall on the same day of the week. In an example illustrated in his application the first day of the month is always a Monday and also the first day of the new moon, the full moon occurring on the 15<sup>th</sup> day of the month. The Meton cycle is defined in Chambers Dictionary of Science and Technology as “*A period of 19 years, which is very nearly equal to 235 synodic (ie. lunar) months; its effect is that after a full cycle the phases of the Moon recur on the same days of the year.*” To achieve his synchronised calendar, Mr Petin has taken these “phenomena of nature” and modified the Meton cycle. He has had to decide where, for example, to insert extra days to ensure that the dates of the month always occur on the same day of the week and to synchronise the phases of the moon with the days of the month. This process is constrained by “rules” necessitated by the cycles referred to above. For example the lunar month comprises approximately 29.531 days and the solar year 365.242 days and to synchronise the two requires certain calculations to be carried out.

- 23 Although Mr Petin does not see it as such, the process of synchronising various cycles within the constraints of time etc imposed by those cycles to achieve his desired result is a form of calculation. Such a calculation must amount to a mathematical method within the meaning of the Act and as such is excluded by Section 1(2)(a) unless it produces a technical effect. The result of this mathematical method is Mr Petin's calendar which in his own words is an informational device which "is only intended to display the phenomena of nature". I do not consider this to amount to a technical effect.
- 24 As I have said, there are 102 claims with claims 1, 38 & 66 being independent and claiming, respectively, a calendar *per se*, a machine readable medium and an electronic unit. They all have in common that they relate to a calendar based on a 19 year Meton cycle and having 8 x 354 day years, 4 x 355 day years and 7 x 384 day years. It seems to me that the invention embodied in this common feature relates to nothing more than a mathematical method which does not produce a technical effect and as such is excluded from patentability by virtue of section 1(2)(a). As an aside, I note that if I am wrong in reaching this conclusion and the invention is not a mathematical method, then I am left with Mr Petin's assertion that it is an informational device illustrating, again in Mr Petin's words, the succession of natural cycles of time. This would appear to be no more than the presentation of information and thereby to be excluded by section 1(2)(d) of the Patents Act, 1977.
- 25 In summary, I find that the invention as defined in claims 1 to 102 fails to meet the requirements for patentability in that it relates to a mathematical method and is excluded from patentability by virtue of section 1(2)(a). I can find nothing in the description to suggest a saving amendment. I therefore refuse the application.

### **Appeal**

- 26 Any appeal against this decision must be filed within 28 days of the date of this decision.

Dated this 2<sup>nd</sup> day of July 2003

P M Back  
Divisional Director, acting for the comptroller