UK Intellectual Property Office □□□□

For Creativity and Innovation

BL O/350/07

28 November2007

PATENTS ACT 1977

APPLICANT The Wandsworth Group Limited

ISSUE Whether patent application number GB 0424542.9 complies with section 1(2)

HEARING OFFICER R C Kennell

DECISION

1 This application was filed on 5 November 2004, claiming a priority of 10 November 2003 from an earlier UK application. It was published under serial no. GB 2 407 891 A on 11 May 2005.

2 Despite amendment of the claims during substantive examination, the applicant has been unable to persuade the examiner that this is a patentable invention within the meaning of section 1(2) of the Act. This matter therefore came before me at a hearing on 17 October 2007. The applicant was represented by its patent attorney, Mr Terry Johnson of Marks & Clerk, and the examiner, Mr Matthew Cope, assisted via videolink. The inventor, Mr Richard Mockett - who is the applicant's Managing Director - also attended the hearing and gave a most helpful explanation of the invention and the background against which it was conceived.

3 For reasons explained below, I gave the applicant an opportunity to make further submissions in order to clarify certain matters that had arisen during the hearing. Further submissions were duly filed on 20 November 2007.

The invention

4 The specification explains that present bedside systems for hospital patients offer only a limited range of analogue services which are expensive (often being dependent on premium rate telephone links) and generally incompatible with hospital data systems. However, the interactive digital system of the invention allows a user, who may be a patient or an authorised hospital staff member, to access and display data stored remotely. Essentially it combines digital interactive entertainment and communication services which the patient pays for, including internet and e-mail, with secure and rapid access to hospital data.

Typically a patient accesses the system by a password or PIN number, whilst hospital staff can securely access clinical data in the hospital data system if authorised to do so by an electronic key or smart card.

5 As the specification explains at page 8

> "The system thus essentially provides for bedside computing which itself provides for access to electronic patient records, management of beds and patient identification, integration with patient administration systems including catering (the patient can order a meal) and dietary control, patient satisfaction surveys, digital imaging transmission to the bedside, health videos and websites for informed consent from a patient, patient monitoring, cognitive exercises and therapies, physiotherapy exercises and reminders for a patient, management of pain via patient controlled analgesia systems, nurse clerking and pre-op checks and finally can provide for administration and discharge of a patient and medication both during hospital stay and after discharge, when the patient returns home following treatment in a hospital."

6 Mr Mockett explained that the invention was all about "computing at the point of care" for the benefit of both patients and hospital staff, a topic which had attracted considerable interest in healthcare circles over the last three or four years. By combining all the above services in, as he put it, "a single device on a single network", Mr Mockett said that the invention had achieved considerable commercial success worldwide and was attracting interest in the NHS.

The form of the claims

7 At the hearing Mr Johnson proposed an amendment to the main claim (claim 1) to present it in terms of an apparatus rather than a system. The proposed claim formed the basis of the discussion at the hearing, but it was not clear to me either that it brought out the supposed distinctive feature mentioned by Mr Mockett or that it distinguished the invention from specification US 5 867 821 (Ballantyne). (It was not disputed that Ballantyne was the closest piece of prior art cited by the examiner.) Therefore, as mentioned above, I gave the applicant an opportunity to make further submissions to clarify this matter, as a result of which Mr Johnson proposed further amendments, adding to the proposed claim the words shown below in italics.

8 The main claim now proposed reads:

> "*A single integrated record and service* apparatus adapted and arranged for use and payment by a patient in a health care environment and adapted for direct access by a patient or a healthcare professional *at a patient's bedside*, comprising
> (i) *a single high-speed Ethernet network including* a data content delivery system,
> (ii) satellite and/or a terrestrial data transmitter the or each of which is remote from the health care environment,
> (iii) *a head end of the data content delivery system including a digital*

infrastructure having a user server/personal computer at the patient's bedside,

(iv) electronic patient records,

(v) options for displaying patient identification,

(vi) integration with patient administration systems,

(vii) a personalized patient identification number or code for a particular patient

(viii) means to enter or read that number or code in the apparatus, and

(viii) means to access the options and select a desired option or options whereby the particular patient or a health care professional can *directly* access respectively the options and the patient records, via the network *at the patient's bedside*."

9 I am satisfied that the amendments proposed at the hearing and in the further submissions do not add subject matter to the original application. I propose to give my decision on the basis of the claim as worded above, taking into account the arguments advanced both at the hearing and in the further submissions.

10 There are also present claims 43-45 to a data display means in respect of which an inventive step objection was outstanding, although this was not addressed at the hearing. The applicant in the further submissions confirmed that it was not intending to proceed with these if the above claim was considered allowable, although it reserved the right to file a divisional application if necessary.

The law and its interpretation

11 Section 1(2) reads:

> "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."

12 Although Mr Johnson referred to some earlier case law at the hearing, there was no dispute that the assessment of patentability under section 1(2) is now governed by the judgment of the Court of Appeal in *Aerotel Ltd v Telco Holdings Ltd* and *Macrossan's Application* [2006] EWCA Civ 1371, [2007] RPC 7 (hereinafter "*Aerotel*"). In that case the court reviewed the case law on the interpretation of section 1(2) and approved a four-step test for the assessment of patentability, namely:

1) Properly construe the claim

2) Identify the actual contribution (although at the application stage this might have to be the alleged contribution)

3) Ask whether it falls solely within the excluded matter

4) Check whether the actual or alleged contribution is actually technical in nature.

13 The operation of the test is explained at paragraphs 40-48 of the judgment. Paragraph 43 confirms that identification of the contribution is essentially a matter of determining what it is the inventor has really added to human knowledge, and involves looking at substance, not form. Paragraphs 46-47 explain that the fourth step of checking whether the contribution is technical may not be necessary because the third step should have covered the point, and that a contribution which consists solely of excluded matter will not count as a technical contribution.

14 Mr Johnson rightly reminded me at the hearing that the invention had to be susceptible of industrial application as required by section 1(1)(c), a point noted at paragraph 9(v) of *Aerotel* as often being overlooked in the debate about the section 1(2) exclusions although clearly an underlying factor. It was agreed in this case that no separate objection would arise under section 1(1)(c) if the section 1(2) objection was met.

Argument and analysis

15 On the basis of the claims prior to the hearing and applying the *Aerotel* test, the examiner had objected that the contribution over the prior art lay wholly within the excluded categories of computer programs and business methods. In his view, (i) the feature of dual access by either a patient directly or by a healthcare professional – the difference over the prior art then apparently alleged by the applicant – was a trivial programming step, and (ii) the hardware and communications technology was known so that even for a claims to a system any further contribution arising from the provision of a paid service to a patient was only characterised by a decision to provide a certain type of service.

16 I need to consider these objections in accordance with the four-step *Aerotel* test, having regard to the main claim now proposed and the expansion of the applicant's objection at the hearing and in the further submissions.

First step – construction of the claims

17 At the hearing I queried whether the features now numbered (iv)-(vii) were in fact apparatus features, and, given that Mr Johnson referred at the hearing to the claim as including the options other than patient records which were available to the patient, whether feature (v) was correctly worded.

18 Mr Johnson accepted that it might be preferable to claim the invention as a system, and that (v) might require clarification. Further amendment of the claim may therefore be necessary if the application proceeds, but for present purposes

I will proceed on the basis that all features of the claim are essential to the invention, and that (v) is to be construed in the wider sense suggested by Mr Johnson.

19 Not surprisingly in view of the explanation of the invention given at the hearing, the claim now emphasises that the invention is a single integrated apparatus including a single network. I am not convinced that, given the general interoperability and interconnection of computer networks, the skilled reader of the specification would necessarily regard the term "single" as precluding the use of a composite network involving different transmission technologies, and I construe the term accordingly.

20 Step (ii) of the claim also requires the satellite or terrestrial transmitter to be "remote" from the health care environment. In his further submissions Mr Johnson contrasted this with the "local" system of Ballantyne which relied on a "master library" for data storage which was within the hospital boundary. However, I am not convinced that there is a clear-cut distinction bearing in mind that the master library in Ballantyne can be sited to serve several hospitals on a regional basis (see col 4 lines 1-3). I construe the claim to mean simply that the satellite or transmitter must not be part of the healthcare environment.

Second step – the contribution of the invention

21 In his further submissions, Mr Johnson elaborated on the arguments that he had made at the hearing, contrasting the invention with the system in Ballantyne. I think it will be helpful to explain that system in some detail in order to appreciate the contribution which the invention makes.

22 Ballantyne discloses a medical information network in which a master library situated within the hospital boundary (or geographically to serve several hospitals) takes in data from a variety of sources, in various formats, and stores it in digital compressed format. External data sources can be linked to the master library by direct broadcast satellite or through landline communications. The data can include, for example, patient records, clinical data, educational and entertainment services, and hospital security and management information. The master library is configured as a client/server computer system having a series of servers each of which is dedicated to a specific function, eg a video server to distribute video services, and the servers are interconnected via a local area network which can be configured as a fast Ethernet. The master library communicates with one or more distributed user sites, which are either nursing stations for temporarily storing the health records for the patients which the station monitors, or patient care stations at the patient's bedside (or residence if the health care is being outsourced) where both patients and medical staff can interact with the medical library via menu formats appropriate to the particular user.

23 Security in Ballantyne is based on the authentication of individuals who wish to access the health record database, various levels of security being applied to different sections of a record. Typically an ID number is assigned to a user, with sensitive data additionally requiring a PIN. As described (at col 7 lines 66 – col 8

line 64), this appears to relate to the authorisation of medical staff rather than the patient; it does not appear necessary for the patient personally to enter any form of identification. However, each care station has a unique code identifying its location, and may also be equipped with a smart card slot to accommodate a "health card" containing health or other data about the patient in digital form; such health cards may also be inserted into a "personal data assistant" for transmission of the data to the care station by a wireless or IR link. (The personal data assistant also allows users to be authenticated by means of a secure signature pen.) The combination of the care station identification code and the uniqueness of the health card means that the system will always know the location of a particular patient.

24 Mr Johnson noted a number of distinctions between the claim as now proposed and the Ballantyne system, which I can summarise as follows:

1) a single network, rather than a system of separate networks as disclosed in Ballantyne;

2) direct access to at the bedside via a head end of the delivery system having a client server/personal computer at the bedside, rather than indirect access through the intermediary of the nursing stations and master library to a plurality of servers each dedicated to a particular function;

3) a remote, as opposed to a local system such as disclosed in Ballantyne where the master library is within the healthcare environment boundary;

in consequence he considered the contribution of the invention to be a new apparatus in which a remote satellite and/or a terrestrial data transmitter provided a single system allowing direct access by a user at a head end of the system, the system including a user server/personal computer at the bedside.

25 In view of my doubt expressed above as to what limitation if any the term "single" might impose, I am inclined to discount it for the purposes of assessing the contribution. That apart I am satisfied that Mr Johnson has correctly defined the contribution. I think the real key to it is feature 2) above.

Third step – is the contribution solely within excluded matter?

26 In line with the judgment in *Aerotel* upholding Aerotel's patent (see paragraphs 53-56 thereof) Mr Johnson argued that the contribution was an apparatus which was new in itself, not just because it gave access to services and medical records, and was not computer software or a method of doing business as such.

27 On the basis of the prior art found by the examiner, I do not think the contribution of the invention as it is now proposed to be claimed can be regarded as simply a matter of programming or a decision to provide a particular type of service. I agree that the contribution does not lie solely within these excluded areas, or indeed any other of the excluded areas. In fairness to the examiner, his original objection was made in respect of much wider claims which did not bring out the features now relied on to characterise the invention; also the focus of the

applicant's arguments has I think shifted somewhat since then.

Fourth step – is the contribution technical in nature?

28 I consider the contribution that I have identified to be technical in nature.

Conclusion and next steps

29 On the basis of the prior art before me, I therefore conclude that the invention of the proposed main claim passes the *Aerotel* test and is not excluded under section 1(2). However, as explained above under "Construction of the claims" above, there are some ambiguities in the proposed wording.

30 In my view these matters are likely to be best resolved in the course of further substantive examination. A number of matters are in any case outstanding, including whether the claim now proposed meets the examiner's objection to lack of inventive step, what amendment of the description and claims is necessary to reflect amendment to the main claim, and whether claims 43-45 are allowable if retained.

31 I will therefore remit the application to the examiner to pursue these matters.

Appeal

32 The question of an appeal may be academic in view of my findings, but I should mention that, under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal would have to be lodged within 28 days.

R C KENNELL
Deputy Director acting for the Comptroller