

**IN THE HIGH COURT OF JUSTICE**  
**CHANCERY DIVISION**  
**PATENTS COURT**

Royal Courts of Justice  
Strand, London, WC2A 2LL

Date: 28/02/2008

Before :

**THE HON MR JUSTICE FLOYD**

Between:

**RESEARCH IN MOTION UK LIMITED** **Claimant**

- and -

**VISTO CORPORATION** **Defendant**

And Between:

**VISTO CORPORATION** **Part 20**  
**Claimant**

- and -

**(1) RESEARCH IN MOTION UK LIMITED** **Part 20**

**(2) RESEARCH IN MOTION LIMITED** **Defendants**

**Mr Antony Watson QC and Mr Thomas Hinchliffe (instructed by Allen & Overy) for the**  
**Claimant and Part 20 Defendants**

**Mr Henry Carr QC, Mr Adrian Speck and Mr Henry Ward (instructed by Taylor**  
**Wessing) for the Defendant and Part 20 Claimant**

**Hearing dates: January 23-25, 28 and 30-31 2008**

**Approved Judgment**

I direct that pursuant to CPR PD 39A para 6.1 no official shorthand note shall be taken of this Judgment and that copies of this version as handed down may be treated as authentic.

.....

THE HON. MR JUSTICE FLOYD

**Mr Justice Floyd :**

## **Introduction**

1. This case is about systems for synchronising e-mail stores. It concerns the validity and infringement of European Patent (UK) No. 996 905 (“905” or “the 905 Patent”). The 905 Patent is owned by Visto Corporation (“Visto”). Research in Motion UK Limited (“RIM”) makes and sells the well known BlackBerry wireless handheld device, and operates the computer software and infrastructure associated with it. In October 2006 RIM commenced an action for revocation of the 905 Patent, and on 4<sup>th</sup> December 2006 a further action seeking a declaration of non-infringement of it in respect of the BlackBerry system as described in a Product and Process Description (“the first PPD”). Visto subsequently acknowledged non-infringement in respect of the first PPD, but pointed out that the PPD omitted any reference to software known as the BlackBerry Mail Connector. The counterclaim therefore included a claim for infringement in respect of that system alone. The Mail Connector is described in the Second PPD and a supplementary letter dated July 2007.
2. Visto has made an unconditional application to amend the 905 Patent which is also before me. Although it does not admit the invalidity of the unamended claims, Visto invites me to consider only the validity of the amended claims. RIM does not oppose the amendment on statutory or discretionary grounds.
3. Visto also responded to the revocation and non-infringement claims by seeking revocation of two RIM Patents: 1,096,727 (“727”) and 1,126,662 (“662”). When the parties exchanged evidence in chief in November 2007, Visto’s evidence dealt with the invalidity of both these patents, whereas RIM’s only dealt with 662. RIM subsequently submitted to revocation of 727. The validity of 662 remained in issue until the week before the trial, when RIM indicated it would submit to revocation of this one as well.

## **Expert witnesses**

4. RIM called **Dr Steven Hand** who is a Senior Lecturer in the Computer Laboratory at Cambridge University. In 1997, the priority date of 905, he was a Research Assistant at the Computer Laboratory, working on his PhD, which he completed in 1998.
5. Visto called **Professor Kin Leung** who is the Tanaka Professor of Internet Technology at the Electric and Electronic Engineering and Computing Departments of Imperial College London. In 1997 he had been working for AT&T Bell Labs for more than ten years, and had obtained or nearly obtained the post of Technology Consultant.
6. Both experts did their best to assist me. Mr Antony Watson QC, who appeared on behalf of RIM with Mr Thomas Hinchliffe, suggested that there were moments when Professor Leung thought it appropriate to make rather argumentative points which favoured Visto. I agree; but on the underlying technical matters on which he was giving evidence I have no doubt that he was trying to be objective; and trying hard. Dr Hand’s relevant experience at the priority date was rather less than that of Professor Leung; and it is clear that he had been significantly

assisted in preparing his reports by documents which had been uncovered by searches carried out by RIM's solicitors, both on his behalf and otherwise. Where this was so he very properly made it clear in his report. Moreover a certain amount of digging of this kind is justified in order to fix the dates when certain techniques became generally used. Nevertheless, I have had to approach his evidence as to what was common general knowledge and as to what was obvious with a little caution as a result. In the end it did not emerge that there was a great deal of dispute between Dr Hand and Professor Leung as to the common general knowledge.

### **Fact witnesses**

7. For RIM I heard from **Michal Rybak**. He is a Manager for Standards at RIM Barbados, but was previously a software developer and architect. He was called to prove the details of the RIM Mail Connector given in RIM's Product and Process Description. In his second statement, served very shortly before the beginning of the trial, he gave some other peripheral evidence about (a) whether RIM had ever thought before the priority date of the 905 Patent about using HTTP to transfer e-mails across firewalls, and why it had not been implemented and (b) the reasons behind RIM's purchase of TeamOn, a company which owned software for transferring e-mails through firewalls using HTTP and (c) whether RIM used Mail Connector as a foot in the door to selling their full BlackBerry Enterprise Solution. He also gave some further important explanation of the functioning of the RIM Mail Connector product, not explained in the PPD.
8. Mr Henry Carr QC, who appeared for Visto with Mr Adrian Speck, said that the inaccuracy of the Second PPD was the responsibility of Mr Rybak, and I should therefore approach his other evidence with some caution. Moreover he drew attention to the fact that Mr Rybak had pointed out a number of inaccuracies in RIM's marketing materials, whilst missing important omissions in the PPD. So Mr Rybak knew the importance of accuracy, and was making a point about it. I shall have to come back to the question of omissions from the PPD. I will bear in mind Mr Rybak's lack of attention to detail when considering his evidence about the peripheral matters I have listed in the last paragraph.

### **Some Technical background**

9. The parties have prepared a helpful but very full Primer on the technical background. Most of it was agreed. It deals with more than is strictly necessary for this case, particularly now that 727 and 662 have dropped out. I summarise some topics below to aid comprehension.
10. The **Internet** is a network of networks. It consists of **Local Area Networks** (LANs) and Wide Area Networks (WANs). A **LAN** is something like a home or office network, having a number of nodes (stations with individual computing power). A **WAN** covers a wide geographic area, and functions with the aid of telephone lines.
11. The **World Wide Web** is one facility by which information can be accessed over the Internet. It is made up of linked pages of information, which can be navigated by means of a **Web browser**. An example of a web browser is Internet Explorer. A "**client**" or "client application" (which may be a web browser) accesses information on the Web on a remote computer, from which it retrieves the information, over the Internet.

12. A **server** provides services to another program by accepting connections from clients. An example is an e-mail server. A Web server listens for clients seeking to connect to it over the Internet.
13. The Web is a combination of three standards: URI, HTTP and HTML. A **URI** is the address of a particular web page. An example is <http://www.firmofsolicitors.com>. The more important ones for this case are HTTP and HTML.
14. **HTTP** (“Hypertext Transfer Protocol”) has been in use on the World Wide Web since 1990. It is the protocol used on the Web to define how a Web browser requests a resource and how the server responds. It is a generic request/response protocol that can be used for a variety of tasks.
15. **HTML** (“Hypertext Markup Language”) is the basic language for documents on the Web.
16. **E-mail** needs no introduction as a concept. E-mail is most commonly transferred over the Internet. To compose an e-mail you need a Mail User Agent (MUA), such as Microsoft Outlook, and a Mail Transfer Agent (MTA). MUAs may use POP3 (Post Office Protocol Version 3) or **IMAP4** protocols to retrieve e-mails and **SMTP** (Simple Mail Transfer Protocol) to send e-mails to an MTA for delivery to its destination. Apart from the text of the e-mail itself, e-mail stores may keep other data associated with e-mails, for example indicating whether the e-mail has been read, forwarded, deleted etc. This is called “**metadata**”.
17. A user may get remote access to e-mails received at a different location (e.g. work e-mails at home or vice versa) in variety of different ways. These included dial-up via a modem and a public telephone line to a private network; dial-up access to an Internet Service Provider via a modem and so on. A **Webmail** service enables a user to access e-mails through a Web browser. An example is Hotmail which was launched in 1996.
18. Auto-forwarding of e-mails can also be used as a means of obtaining remote access. The user pre-configures his e-mail account at one location so that, when he is away from that location, any received e-mail is automatically forwarded to another account to which he will have access.
19. **TCP** is the protocol responsible for managing the transmission of data between computers. It includes so called “**ports**” which can be reserved so that a particular program can communicate through them. So if a program has reserved Port No 3, any incoming data for that program will be directed by TCP to that port.
20. Well known ports include Port 25 for SMTP and Port 80 for HTTP.
21. A **firewall** is a system designed to prevent unauthorised access to or from a private computer network connected to the Internet. Packets of data entering or leaving the network are examined by the firewall system to see whether they meet the security policy of the private network.
22. A **proxy** carries out tasks on behalf of another computer. A proxy must interpret and if necessary rewrite messages before forwarding them on. It sits between a client, such as a Web

browser, and the destination server. It may speak to the destination server in a protocol different from that in which it receives its instructions from its client.

23. There was no dispute that all the above was part of the relevant common general knowledge.

## **The 905 Patent**

### **The Background to the invention**

24. The 905 Patent is entitled “System and Method for Synchronizing Electronic Mail across a Network”. It has a priority date of 22<sup>nd</sup> July 1997. It is necessary to look with some care at the disclosure because there are two major disputes between the parties as to its technical content. The first, which relates to an added matter attack, is whether there is any disclosure of the use of HTTP to pass e-mails through the firewall of a LAN. Strictly this should be dealt with by first looking at the application as filed. But the parties have expressly agreed that it makes no difference to the argument to use the disclosure (other than the claims) of the granted patent, as the matter is said to be added by the claims alone. The second issue on disclosure is the background to the issue of construction: what the term “synchronizing” is used in the patent to mean.

25. The Description of the Background Art begins at [0002] by explaining that maintaining data consistency across a computer network is a concern. Where multiple, independently modifiable copies of a document are maintained, a user risks using an outdated copy. These problems are said at [0003] to be exacerbated when some copies of the document may be behind firewalls, making access to all copies problematic; and at [0004] to arise particularly in the case of e-mail, when a remote user may not be able to get up-to-date access to his e-mail store at work, because of the security systems implemented there. The objective of the invention is put this way in [0006]:

“Therefore, a system and method are needed for providing users with e-mail consistency and accessibility across a computer network.”

26. [0007] explains that a prior US specification (Brunson) describes a mechanism for synchronising a mail box in an e-mail server with a mailbox in a voice-mail server. Synchronisation is effected by creating a corresponding entry in one mailbox for every entry that arrives in the other mailbox of the mailbox pair.

### **The Summary of the Invention**

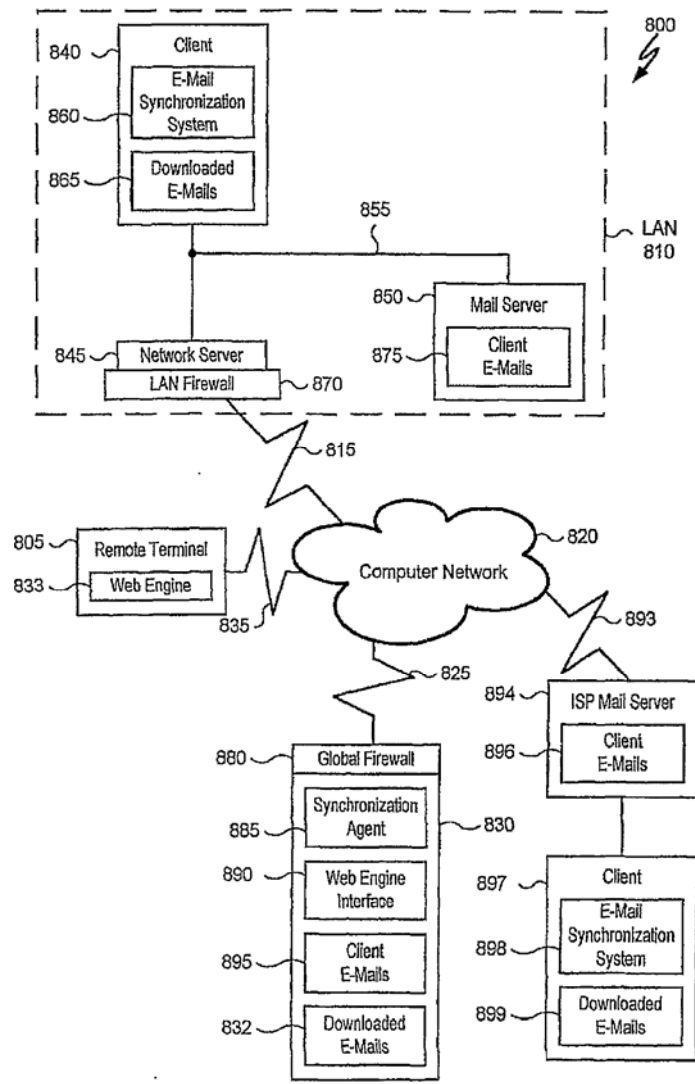
27. The Summary of the Invention starts by referring the reader to the claims for “various aspects of the invention”. [0009], [0010] and [0011] describe respectively (i) a means for retrieving an e-mail from a server, (ii) a synchronisation module for deciding whether to send the e-mail to a second mail store, possibly on a “global server” which provides HTML access to its contents for roaming users, and (iii) a communications module for establishing a channel with the second mail store, possibly through *the second mail store’s* firewall, to send the e-mail to the second store using HTTP.

28. [0012] and [0013] summarise the three components described in [0009] to [0011] in apparatus and method terms respectively. The impression given thus far is that the apparatus and method are set up to retrieve an e-mail from a first mail store, decide (using a synchronisation module) whether to send it to a second mail store, and if the **second** mail store is protected by a firewall set up an HTTP communications channel through it to the second mail store so as to get the e-mail **into** the second store.
29. [0014] is important because it discusses three sites: work, home and the global server and communication between them. We have been told that the work site (see [0004]) and the global server (see [0011]) may be protected by firewalls.
- “[0014] The system and method advantageously use a trusted third party to enable synchronization of electronic mail across a network. Accordingly, a user who maintains for example a work site, a home site and the global server site can synchronize e-mails among all three sites. The roaming user thus can access and reply to e-mails while away from the addressed site. .... Further, because synchronization is initiated from within the firewall and uses commonly enabled protocols such as HyperText Transfer Protocol (HTTP), the typical firewall which prevents in-bound communications in general and some outbound protocols does not act as an impediment to e-mail synchronization.”
30. The final sentence requires some thought as to what, if any, specific firewall(s) it is talking about. It gave rise to rival submissions, Visto contending that it must be referring to the LAN firewall, RIM contending that it was referring to the global firewall or if not, that it was too ambiguous to get a clear disclosure about the LAN firewall and the protocol used to traverse it.
31. It should be recalled that thus far in the description we have been told (a) that there is a problem for the roaming user getting in to his work intranet protected by its firewall ([0004]), (b) that, with the invention, the global server may be accessed by the roaming user using HTML ([0010]) and (c) that a communications channel can be established from the first mail store to a global server through the global server’s firewall using HTTP ([0011]). I think, with this background, the sentence is saying three things:
- i) that because the synchronisation is initiated from behind a firewall, so that the synchronisation initiation is outward, that firewall does not act as an impediment as it would if the roaming user tried to initiate synchronisation by getting inward access to it from outside;
  - ii) that because synchronisation uses a generally enabled protocol such as HTTP, synchronisation commands will get out through the firewall (because only “some outbound protocols” are prevented) and by implication therefore a communications channel using HTTP can be established.
  - iii) that because of (i) and (ii) no firewall will get in the way of e-mail synchronisation.
32. It follows that I think the skilled reader would understand that, so far as the LAN firewall is concerned, HTTP is used to traverse it.

33. I do not think that the skilled person's view would be displaced by a reading of the description of the specific embodiments. The detailed description is in two parts. Figures 1 to 7, described up to [0056] deals with the general case of maintaining document consistency, whereas Figure 8 and subsequent are specific to e-mails.
34. In Figure 8, reproduced below, the LAN 810 is coupled via a communications channel 815 to a computer network 820 such as the internet. There is a LAN firewall protecting the LAN. There is also a global server 830 coupled to the internet, protected by its own firewall 880. In addition there is a remote terminal 805 connected to the internet via a communications channel 835. This remote terminal may be a "smart telephone", a Personal Data Assistant, or a laptop etc<sup>1</sup>. Finally, an ISP mail server 894 is connected to the internet via a channel 893, but is not itself important for the purposes of this case.

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<sup>1</sup> [0064]



**FIG. 8**

35. The e-mail synchronisation system 860 within the LAN is said at [0063] preferably to initiate and control data synchronisation. The e-mail synchronisation system includes a “base system” which includes a communications module, a synchronisation start module and an e-mail synchronisation module (described by reference to other figures), all within the LAN. The communications module establishes a communications link with the synchronisation 885 on the global server. The specification then says this:

[0070] ..... The communications module 1005 may further include routines for applying Secure Socket Layer (SSL) technology and user identification and authentication



techniques (i.e., digital certificates) to establish a secure communication channel through the global firewall 880. Because synchronization is initiated from within the firewall and uses commonly enabled protocols such as HyperText Transfer Protocol (HTTP), the typical firewall which prevents in-bound communications in general and some outbound protocols does not act as an impediment to e-mail synchronization. ....

The first sentence is talking expressly about establishing a channel through the global server's firewall. The second sentence is a repetition of the passage that I have already referred to in [0014]. On any basis the two sentences are not happily juxtaposed. Visto argue that the firewall referred to in the second sentence must throughout be the LAN firewall, not the global firewall, as synchronisation is not, at least in the preferred arrangement, initiated from within the global firewall and the global firewall does not "prevent inbound communications in general". I am not so sure. I think the skilled reader would see this as a repetition of the general point made at [0014] but made in the context of (and somewhat inappropriately in respect of) the global firewall. It is certainly not clear. But I do not think it would alter the general teaching of [0014].

36. What does help a little is the description of the synchronisation start module in [0073].

[0073] The synchronization-start module 1020 includes routines for determining when to initiate e-mail synchronization. For example, the synchronization-start module 1020 may initiate e-mail synchronization upon user request, at a particular time of day, after a predetermined time period passes, after receiving a predetermined number of e-mails, after a user action such as user log-off or upon like criteria. The synchronization-start module 1020 initiates e-mail synchronization by instructing the e-mail synchronization module 1025 (described below) to begin execution of its routines. It will be appreciated that communication with the synchronization agent 885 preferably initiates from within the LAN 810, because a security system such as the typical firewall 870 prevents in-bound communications and allows outbound communications. The synch-start module 1020 may instruct the communications module 1005 to establish the communications link with the synchronization agent 885 of the global server 835.

37. It is true that there is no express discussion here of the use of HTTP, but the LAN firewall 870 is described as a typical firewall. Read in the light of the general teaching at [0014], the skilled reader would know that he was being told to use HTTP to get his synchronisation commands out through the LAN firewall.

38. There are passages comparable to [0070] and [0073] (which relate to Figure 8) in the description based on Figure 1 at [0034] and [0038]. In [0034] the puzzling second sentence of the two sentences I have quoted from [0070] is not included. In [0038] the LAN firewall is again described as typical. Read with [0014] the effect is the same as [0073].

39. It is worth pointing out that the above is more or less the whole of the 905 Patent's disclosure about the use of HTTP. It is assumed that the skilled addressee would know how to send e-mails through a firewall using this protocol. Moreover the disclosure does not distinguish between HTTP on the one hand and other "commonly enabled protocols". The patentee saw no

special benefit in HTTP beyond the fact that it uses a port which is commonly enabled. Those observations are of some significance when one comes to the question of inventive step.

40. Both parties relied on numerous passages in the specification to illuminate the meaning of “synchronising” and “synchronisation”. The dispute on construction of the claims, when we come to it, is about whether the simple auto-forwarding of an e-mail from one mail store to another is “synchronisation”, or whether the term requires the capacity to do more. In particular (a) does it require all the information about the e-mail to be rendered consistent between the stores, such as whether it has been read, forwarded, replied to or deleted to be passed to the second mail store as well (“the metadata point”) and (b) does it require bidirectional synchronisation i.e. must changes to the e-mail at the remote station be passed back to the LAN (“the bi-directional point)?
41. Thus Visto were able to point to passages in the Background (e.g. [0003] and [0006]) which speak of maintaining consistency between stores in a context where documents may be altered at different sites. Visto relies also on the fact that what the description of the specific embodiment calls “version information” is kept in the remote and global servers, something that one would not need in a simple auto-forwarding case. Visto also relies on the way in which the synchronisation agent in the global server co-operates with the base system in the LAN to synchronise the data in the two servers. Auto-forwarding would not require this. Visto relies further on Figure 4 which applies equally to a “base system” in the remote station, which shows that synchronisation occurs between the remote station and the global server as well as between the LAN and the global server, so that it occurs in both directions. There were further examples taken from the specific embodiment.
42. RIM did not challenge the proposition that the specification described a system that would both synchronise the metadata and synchronise bi-directionally. RIM submitted that the specification also included examples where synchronisation did not necessarily include anything more than making sure that all e-mails received at the LAN were forwarded to the global server.
43. RIM placed reliance on the description of Brunson in [0007] which I have referred to above, which suggests that forwarding (although perhaps two way) was regarded as synchronisation. In [0010] the specification describes the function of the synchronisation module as deciding whether to send an e-mail to the second store, again consistent with forwarding being enough. At [0040] and [0076] there are passages dealing with what is “appropriate synchronisation responsive action”. [0076] says this:

[0076] The e-mail synchronization module 1025 still further includes routines for performing an appropriate synchronizing responsive action. Appropriate synchronizing responsive actions may include instructing the communications module 1005 to establish a communications link with the synchronization agent 885 of the global server 835, sending copies of each e-mail to the global server 835, redirecting (i.e., sending without maintaining a copy) only the client e-mails 875 or 896 to the global server 835, or redirecting the downloaded e-mails 865 or 899 and the client e-mails 875 or 896 to the global server 835. To send a copy or an original of an e-mail, the e-mail synchronization module 1025 includes a translator 1040 for translating the e-mail from

Format A or Format B to the global format. The e-mail synchronization module 1025 then instructs the e-mail module 960 of the web engine 955 to send the translated e-mails to the global server 835.

So, according to this passage, simply forwarding an e-mail is a synchronisation responsive action.

44. Mr Watson's strongest point on behalf of RIM was based on Figure 14

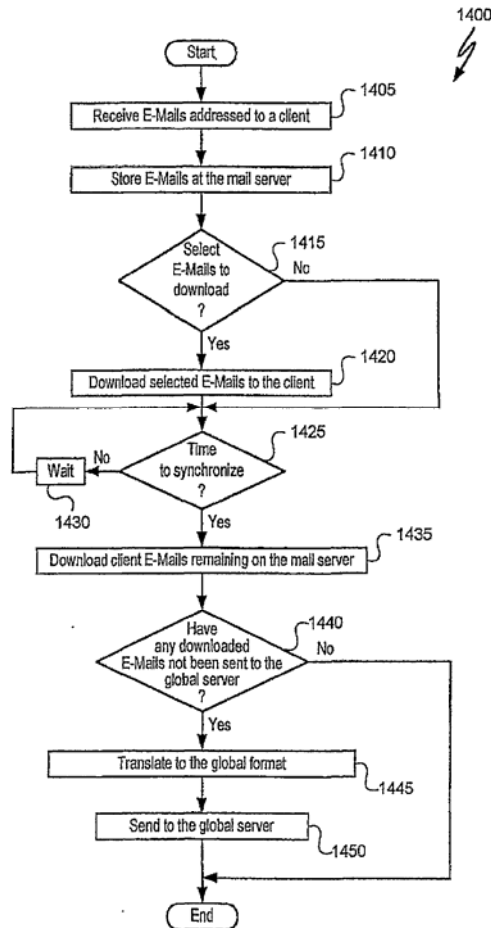


FIG. 14

Figure 14 is described as a flowchart illustrating a method for synchronising electronic mail in a computer network both in the list of figures and at [0087]. It has a start and an end. In terms of interaction between LAN and the global server between the start and the end it does no more than forward the selected e-mails. There is no reference to the latest metadata or bi-directional synchronising, yet the Patent regards this as a method of synchronising e-mails.

45. Mr Carr reminded me that Figure 14 was to be read with the remainder of the description, in particular that of Figure 8, so that it should not be taken in isolation. The fact that

synchronisation might include a process such as Figure 14 did not mean that synchronisation did not require more. Mr Speck, who followed on this point, emphasised the fact that step 1440 indicates most clearly that Figure 14 is not the whole picture, as it asks whether the e-mails have already been downloaded, albeit that they would have been downloaded in the same direction.

46. I conclude that it would appear from the context of the Patent that synchronisation can be carried out to varying levels of sophistication. At its lowest (and that is what matters for these purposes) it is forwarding of copies of selected e-mails to a second server. Whilst Mr Carr is right that the specification enables a sophisticated kind of synchronisation, it also describes much more basic processes as amounting to synchronisation as well. Figure 14 is not describing a process included within synchronisation: it is said to illustrate a method for synchronising.
47. This analysis of the disclosure does not foreclose the issue of construction, to which I shall have to return after setting out the claims.

### **The Claims**

48. Claim 1 is to a “system”, whereas claim 18 is to a method. I set them out below, as proposed to be amended:

#### ***Claim 1***

- (i) An e-mail system comprising a local area network having connected thereto: a mail server (850) including a first mail store;
- (ii) a firewall (870), wherein the firewall is a firewall for the local area network;
- (iii) and a system comprising: retrieving means (950, 965, 960) for retrieving an e-mail from the first mail store (850, 894);
- (iv) determining means (1025), coupled to the retrieving means, for using a predetermined criterion to determine whether to send a retrieved e-mail or a copy or a format translation thereof to a second mail store;
- (v) establishing means (1005), coupled to the determining means, the establishing means including security means for establishing, from within a the firewall, via a hypertext transfer protocol communications channel through the firewall, secure communications with the second mail store; and
- (vi) sending means (1025, 955), coupled to the establishing means, for sending the e-mail or a copy or a format translation thereof to the second mail store, via the communications channel,
- (vii) wherein the system is operable to initiate e-mail synchronization from within the local area network firewall,

- (viii) wherein the system further comprises a global mail server that includes the second mail store,
- (ix) and a third mail store located at a remote terminal outside the local area network firewall,
- (x) and wherein the remote terminal comprises a smartphone.

### ***Claim 18***

A method of operating a computer system comprising:

- (i) retrieving (1420) an e-mail from a first mail store; using (1440) a predetermined criterion to determine whether to send the retrieved e-mail or a copy or a format translation thereof to a second mail store;
- (ii) establishing (1450), from within a firewall, via a hypertext transfer protocol communications channel through the firewall, secure communications with the second mail store; and
- (iii) sending (1450) the e-mail or a copy or a format translation thereof to the second mail store via the communications channel, if the predetermined criterion indicates sending the e-mail,
- (iv) wherein said sending step comprises sending the e-mail or a copy or a translation thereof to a global mail server,
- (v) further comprising forwarding the e-mail or a copy or a translation thereof to a third mail store located at a remote terminal outside the firewall,
- (vi) wherein the remote terminal comprises a smartphone.

49. It will be noticed that claim 18 does not include, even as amended, any limitation about “synchronisation”. Mr Carr accepted that he could not foresee circumstances in which claim 1 could fall but claim 18 survive.

### **Construction**

#### **Law - Approach to construction**

50. The correct approach to the construction of a patent specification and its claims is now well settled. The task for the court is to determine what the person skilled in the art would have understood the patentee to have been using the language of the claim to mean: see *Kirin Amgen v TKT* [2005] RPC 9 [30]-[35]. In that case the list of principles to be found in the judgment of Jacob LJ in *Technip France SA’s Patent* [2004] RPC 46 was approved subject to minor modifications. Pumfrey J in *Halliburton v Smith* [2006] RPC 2; [2005] EWHC 1623 at [69] to [69] listed those modified principles, and added some observations of his own. I apply those principles here.

51. It is for the court and not the witnesses to come to conclusions about what the claim means. Subject to the well-known exception about technical terms with a special meaning, the construction of a patent is a question of law: see e.g. per Hoffman LJ (as he then was) in *S.T.E.P. v Emson* [1993] RPC 517 at 522.

52. A number of issues of construction arise:

*“mail store”*

53. There was some initial dispute about how durable the mail store had to be before it was a mail store. In the end it was common ground that the answer was “not very”. Mail stores do not have to have any particular degree of permanence. That was inevitable in the light of [0086] which says that the e-mails can be stored only in RAM:

“After the remote terminal 1505 connects with the global server 835, the e-mail module 1355 communicates with the e-mail module interface 1140 to select and to download client e-mails 895 or downloaded e-mails 832. The e-mail module 1355 stores the e-mails downloaded from the global server 835 to the data storage device 1330 as “downloaded e-mails 1340.” Alternatively, the e-mail module 1355 may store the e-mails 1340 only in RAM 1335 so that at the end of the session copies of the e-mails 1340 do not remain at the remote terminal 1505.”

*“a hypertext transfer protocol communications channel through the firewall”*

54. RIM submitted that it is enough if HTTP is used as part of the means of getting through the firewall: the claim does not require that that which leaves the firewall is still HTTP.

55. Visto submitted that HTTP must be used all the way through the firewall, as its purpose would be seen as enabling communication through the firewall without having to re-configure it.

56. I accept Visto’s submission. The skilled person would appreciate that the HTTP communications channel should go all the way through the firewall. It would be no good if it went only part-way.

*“synchronisation”*

57. I have dealt with the disclosure of the 905 Patent about synchronisation above. The claim requires the system to be “operable to initiate e-mail synchronization” but is otherwise silent on what synchronisation requires. The earlier part of the claim has merely required “means” for retrieving an e-mail from a first mail store in a LAN, deciding whether to send it to a second store, establishing an HTTP communications channel through the firewall round the LAN and sending it to the second store. Beyond using the word “synchronization”, the claim does not do anything to suggest that further “means” are necessary, as they clearly would be if bi-directional synchronization, or updating metadata were a requirement.

58. Mr Carr drew attention to a number of external indicators that the terms “e-mail synchronisation” would be taken by the skilled person to include the latest metadata and be bi-

directional. Firstly he drew attention to the way the parties had described it in the agreed Primer:

*“Typically, synchronisation is the process of keeping multiple copies of a dataset consistent with one another or to maintain data integrity.*

*More specifically, file synchronisation is the process of making sure that two or more copies of a given file which can be stored at different locations contain the same up-to-date data.”*

59. I do not think this description in the Primer really addresses the metadata or bi-directional points. If the first dataset is only updated at one place by additions to it, it would be synchronised if all the additions are sent to the second dataset on this description.
60. Mr Carr also relied on some cross-examination of Dr Hand, about whether e-mails forwarded to a secretary would be “synchronised”, but there was no evidence that the term had a special technical meaning when applied to e-mails or databases, so I do not think that Dr Hand’s answers are admissible.
61. In my judgment the term “synchronised” is used in the 905 Patent in a way which includes mere auto-forwarding of e-mails received at the first store. The decisive factor is the way that Figure 14 is described as a method for synchronisation, with a “start” and “end” and which involves, so far as the two mail stores are concerned, forwarding an e-mail in one direction only. It seems to me that so to describe Figure 14 would be inconsistent with a requirement that “synchronisation” necessarily requires more. I think the skilled person would expect that if he carried out the method of Figure 14 he would be using a system within claim 1. That construction is entirely consistent with the earlier part of the claim, which does not expressly require any more than forwarding. Forwarding is also what the synchronisation module in [0010] is described as doing. It is also consistent with the other references relied on by Mr Watson. The fact that the specification describes more sophisticated types of synchronisation, on the other hand, is not inconsistent with any of this. Moreover, if synchronisation requires something more, it is difficult to identify what more is required; one is naturally drawn to the lowest common denominator i.e. the ability to forward an e-mail from one store to another.

*“operable to initiate...from within the firewall”*

62. I have referred already to the passages in the specification which teach the advantage of initiating synchronisation from within the firewall: e.g. [0014]. The contrast is, I think, with having to initiate synchronisation from outside the firewall: in other words a situation in which nothing will happen unless the remote sets things in motion. The expression, in my judgment, requires the LAN to have within it something which can cause synchronisation to be set in motion without needing to be prompted to do so by something outside the firewall.

*“global mail server”*

63. Visto submitted that the terms “global” as used in the specification and claims is in contrast to “local” (as in LAN). RIM submitted that it means that the server can be accessed from anywhere.

64. I think it is correct to construe “global” in contradistinction to “local”. Beyond that I do not think it conveys very much. Visto tried to take it a step further, and say that the “global” server must be wholly outside any corporate firewalls. I do not think it is possible to read all this into the term. The significance of the point is clearer in the context of the Lotus Notes/Domino case dealt with below.

### **The inventive concept**

65. I would summarise the inventive concept of claim 1 in this way. It is an e-mail system comprising a firewalled LAN with a first mail store and systems for retrieving e-mails, deciding whether to send them to a second mail store within a global server, establishing a secure HTTP communication channel through the firewall and sending the e-mail. It also has means operable to initiate e-mail synchronisation (as I have construed the term) from within the LAN firewall and a smartphone with a third mail store.

66. Setting out the inventive concept in that way can cause the significance of some features to be lost. Mr Carr stressed that the 905 Patent provided a system which enabled the remote user to gain access to a fully up-to-date e-mail store without any implementation or assistance from the corporate IT department. He says there are three key aspects to the way this is provided. The first is because the system uses HTTP to cross the firewall, which is a commonly enabled port. The second is because it uses a global server which may be maintained by a third party. The third aspect is that the synchronisation is initiated from within the firewall, so that the user does not have to negotiate a way, by dial-up or other means, through or around the firewall.

67. I must bear these matters in mind when assessing inventive step, to the extent that they are consistent with my approach to “synchronisation” and “global server”.

### **Validity**

#### **Law – novelty**

68. A patent will be invalid for lack of novelty if the invention claimed in it is not new in the light of the state of the art at its priority date. The state of the art is everything made available to the public by written or oral description or by use or in any other way (see s. 2(2) 1977 Act).

69. In *Synthon BV v SmithKline Beecham plc* [2005] UKHL 59 Lord Hoffmann explained the dual requirement for the objection of lack of novelty to succeed: disclosure and enablement. Only disclosure is of importance to the issues in this case. Lord Hoffmann said this at paragraph 20:

“20. The concept of what I have called disclosure has been explained in two judgments of unquestionable authority. The first is Lord Westbury LC in *Hill[s] v Evans* (1862) 31 LJ(NS) 457, 463:

"I apprehend the principle is correctly thus expressed: the antecedent statement must be such that a person of ordinary knowledge of the subject would at once perceive, understand and be able practically to apply the discovery without the necessity of making further experiments and gaining further information before



the invention can be made useful. If something remains to be ascertained which is necessary for the useful application of the discovery, that affords sufficient room for another valid patent."

The second authoritative passage is in the judgment of the Court of Appeal (Sachs, Buckley and Orr LJ) in *General Tire and Rubber Co v Firestone Tyre and Rubber Co Ltd* [1972] RPC 457, 485-486:

"To determine whether a patentee's claim has been anticipated by an earlier publication it is necessary to compare the earlier publication with the patentee's claim...If the earlier publication...discloses the same device as the device which the patentee by his claim...asserts that he has invented, the patentee's claim has been anticipated, but not otherwise. ...

When the prior inventor's publication and the patentee's claim have respectively been construed by the court in the light of all properly admissible evidence as to technical matters, the meaning of words and expressions used in the art and so forth, the question whether the patentee's claim is new...falls to be decided as a question of fact. If the prior inventor's publication contains a clear description of, or clear instructions to do or make, something that would infringe the patentee's claim if carried out after the grant of the patentee's patent, the patentee's claim will have been shown to lack the necessary novelty...The prior inventor, however, and the patentee may have approached the same device from different starting points and may for this reason, or it may be for other reasons, have so described their devices that it cannot be immediately discerned from a reading of the language which they have respectively used that they have discovered in truth the same device; but if carrying out the directions contained in the prior inventor's publication will inevitably result in something being made or done which, if the patentee's claim were valid, would constitute an infringement of the patentee's claim, this circumstance demonstrates that the patentee's claim has in fact been anticipated.

If, on the other hand, the prior publication contains a direction which is capable of being carried out in a manner which would infringe the patentee's claim, but would be at least as likely to be carried out in a way which would not do so, the patentee's claim will not have been anticipated, although it may fail on the ground of obviousness. To anticipate the patentee's claim the prior publication must contain clear and unmistakable directions to do what the patentee claims to have invented...A signpost, however clear, upon the road to the patentee's invention will not suffice. The prior inventor must be clearly shown to have planted his flag at the precise destination before the patentee."

If I may summarise the effect of these two well-known statements, the matter relied upon as prior art must disclose subject-matter which, if performed, would necessarily result in an infringement of the patent."

## **Law – Inventive Step**

70. A patent will be invalid for lack of inventive step if the invention claimed in it was obvious to a person skilled in the art having regard to the state of the art at the priority date.
71. The familiar structured approach first articulated by the Court of Appeal in *Windsurfing v Tabur Marine* [1985] RPC 59 (CA) has recently been explained and restated in the judgment of Jacob LJ in *Pozzoli v BDMO SA*, [2007] EWCA Civ 588; [2007] FSR 37 at [23].

“In the result I would restate the *Windsurfing* questions thus:

- (1) (a) Identify the notional "person skilled in the art"
  - (b) Identify the relevant common general knowledge of that person;
- (2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it;
- (3) Identify what, if any, differences exist between the matter cited as forming part of the "state of the art" and the inventive concept of the claim or the claim as construed;
- (4) Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?

72. This approach assists the fact-finding tribunal, but is not a substitute for the statutory question: “is it obvious”? In applying it, as elsewhere, hindsight is impermissible. It has to be remembered that the skilled person is not in a position to perform his own *Pozzoli* analysis. It is particularly important to remember that the first three stages are merely those which the court needs to go through in order to equip itself with the tools to answer the statutory question, which is the fourth one. The first three steps involve knowledge of the invention, which must then be forgotten for the purposes of step 4. What one is seeking to establish is whether the claim extends to methods or objects which are, without knowledge of the invention and without inventive capacity, obvious.
73. A question which often arises, and arises here, is whether the absence of a particular motive to take a particular step between the prior art and the invention is fatal to an obviousness attack. It must now be regarded as settled law that it is not. In *Pharmacia v Merck* [2001] EWCA Civ 1610; [2002] RPC 41, Aldous LJ cited with approval a passage in Laddie J’s judgment in *Hoechst Celanese v BP Chemicals* [1997] FSR 547 at 573. The court will readily assume that technicians and businessmen will wish to make trivial changes to what is known in order to produce essentially the same result. That is not to say motive is irrelevant: it is one of the many factors that has to be balanced in answering the statutory question. It is easier to show a step is obvious if there is a strong motivation to take it. If the advance is not as trivial as the *Pharmacia* and *Hoechst* cases require, the absence of motivation is a factor of which account must be taken in the balancing exercise.

74. A related point is that it is not legitimate to look at the issue of obviousness solely from the point of view of someone in the commercial position of an established manufacturer or user of a particular product. The court must consider new entrants as well. As Laddie J said in *Brugger v Medic-Aid* [1996] RPC 635 at 653:

“Obviousness is tested against the mental and developmental norm of a notional uninventive person skilled in the art. In doing that the law is protecting not only established businesses which may wish to adopt new products, processes or designs or modify existing ones but also the new entrant who has employed persons skilled in the art to help him get into the market. Each of those categories of trader must be free to adopt what is obvious”

75. The primary evidence on the question of obviousness is that of the expert and secondary evidence must be kept in its place: see Nicholls VC in *Molnlycke v. Procter & Gamble* [1994] RPC 49 at 112. The usefulness (or otherwise) of the expert evidence is not so much the assertion (obvious/inventive) which the expert expresses, but the explanations and reasons he gives for them: see Jacob LJ in *Rockwater v. Technip* [2004] RPC 46 at [6] to [15].

### ***Lotus Notes***

76. Four Lotus Notes publications were cited in the Grounds of Invalidity:

- (i) “Working with Lotus Notes and the Internet”;
- (ii) “Lotus Notes release 4.5 Administrator's Guide”;
- (iii) “The Domino Defence: Security in Lotus Notes and the Internet”; and
- (iv) “Lotus Notes Network Design”.

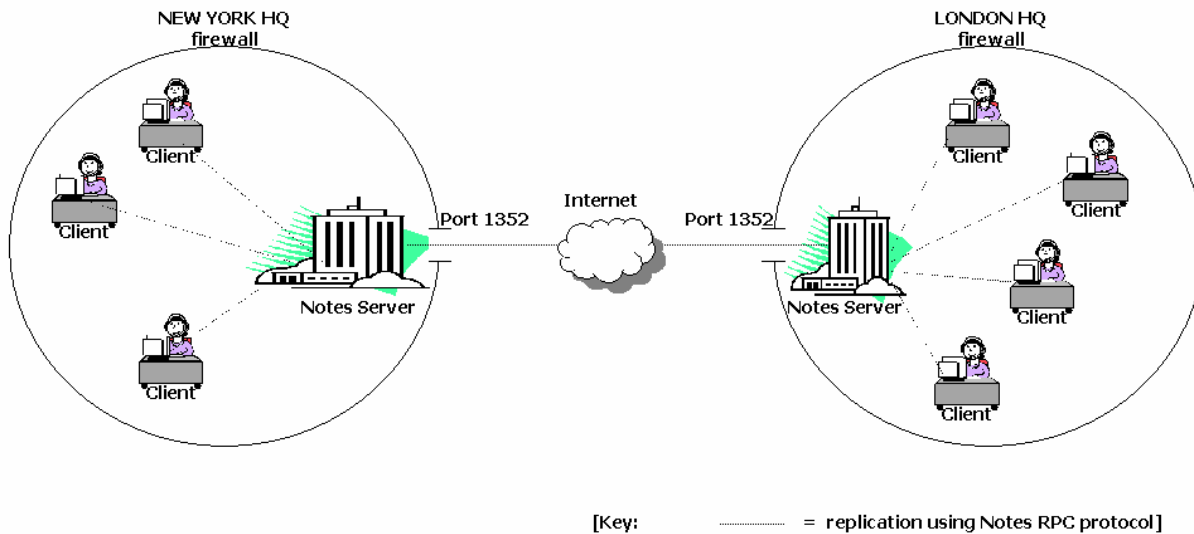
77. Although it was not admitted that the Domino Defence document was made available to the public before the priority date, it was in the end admitted by Visto that a draft had been made available to the public on the internet, and that I could assume for the purposes of this litigation that the information contained in the pleaded document had been made available to the public (although not in that precise way).

78. At the trial, the case on Lotus Notes was developed on the basis of “The Domino Defence”. The other documents have therefore fallen away in relevance. I start by giving a short explanation of what Lotus Notes was. There was no suggestion that it was not legitimate to read Lotus Notes with this information in mind.

79. Lotus Notes (or “Notes”) was a system that allowed work groups within a single organisation to share data, whilst ensuring that the users had access to the most up-to-date versions. It did so by replicating entire databases. By the priority date it was widely used. It allowed organisations with multiple sites, even in different time zones, to share a common up-to-date database.

80. Notes had its own protocol for Notes-to-Notes communications called Notes Remote Procedure Call or (easy to remember for patent lawyers) Notes RPC. Installation of Notes required the corporate firewall to be configured to allow communication through Port 1352. Professor Leung illustrated Lotus Notes thus:

Diagram C – an example of a Lotus Notes architecture



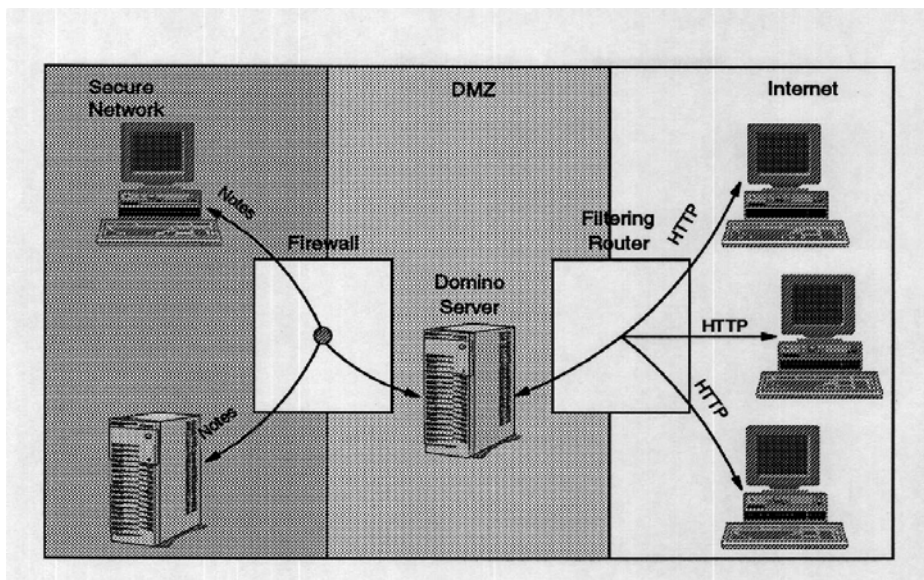
81. The Notes POP 3 server allows a client running Internet Explorer (for example) to retrieve e-mail from a host server also running POP3. A Notes POP3 server continuously listens for connection requests from clients over TCP/IP Port 110.
82. The document “Working with Lotus Notes and the Internet” has a description of how Lotus Notes may be implemented with an existing firewall server. At pages 274 onwards, it gives two examples of ways to implement Internet security in a Notes environment, one working with an existing firewall server and the other working with an application level firewall server.
83. In the first system Notes traffic is simply passed through a packet filter firewall on TCP port 1352. Two examples are given of application level methods. The first uses a Notes Passthru server as a proxy; the second an HTTP proxy server.
84. The Notes Passthru server sits between the Notes client and Notes server and the firewall, which is illustrated as a packet filter on TCP port 1352. So the firewall is traversed using Notes RPC as the protocol.
85. The HTTP proxy server would be placed in a similar position. The document explains that HTTP would always be used to communicate between an internal user and the HTTP proxy

server, but not necessarily thereafter. The document also points out that in order for Notes RPC to work with the HTTP proxy, the proxy needs to support CONNECT. The HTTP proxy opens a secure tunnel using the CONNECT method. So, in this instance, HTTP would be used up to the HTTP proxy server, but Notes RPC is the protocol used to get through the firewall.

86. There is no doubt that the Lotus Notes system of replication will initiate a full synchronisation in the sense contended for by Visto. It will do this for e-mail stores (along with a lot of other data), and the initiation will come from within the LAN.

*The Domino Defence: Security in Lotus Notes and the Internet*

87. This document is dedicated to Lotus Notes and Internet security. Section 7.1.2 describes a “DMZ” configuration, in which a web server called “Domino” is positioned between an inner firewall and outer firewall, a so-called de-militarised zone. The outer firewall is designed to allow inbound sessions to reach certain data, without compromising the security of the LAN itself.
88. Figure 118 illustrates the DMZ configuration thus, where the inner firewall is on the left and the outer firewall is marked “Filtering Router” on the right:



89. Figure 117 is similar, without indicating the specific protocols used. However in Figure 117 the left hand firewall is labelled “Inner Firewall. Isolates private network from attack”, whilst the right hand firewall is labelled “Outer Firewall or Filtering Router. Discourages attacks on exposed server”. The Domino Server is therefore outside the secure private network, and to that degree exposed. It has some protection of its own.

90. The Domino Defence says that the DMZ is

“neither inside the private network nor part of the Internet. IP filters are employed to screen this network. They are designed to allow inbound sessions to reach the services we are providing, but still provide some protection. Between the DMZ and the private network lies a more solid boundary.”

So the Domino server is definitely outside the LAN. It is not part of the Internet, but the claim is silent as to that. It also says

“In fact, from the point of view of a client on the Internet, a Domino server is just another world wide web server, so we can reasonably apply standard Internet practices for positioning and protecting it, which means that the best configuration is within the DMZ”

That sentence is a recognition that even if the Domino server were to be positioned so as to communicate with the LAN over the Internet, it would normally be protected by a firewall of a similar kind to the outer firewall.

91. The Notes server inside the internal firewall may replicate databases with the Lotus Notes Domino server in the DMZ. The Domino server may then convert Notes content into HTML content and the resulting data may be accessed by the Web browsers. As discussed already, communication across the inner firewall is via Notes RPC on port 1352.
92. It was common ground that, however one looked at the DMZ arrangement, there was no HTTP communications channel through the firewall which is initiated from within the firewall.
93. The document also mentions two other possibilities. The first is that the Domino server is within the secure network. This it says should never be done. The second is that the server is directly connected to the Internet instead of in a DMZ. The preferred solution is said to be the DMZ.

### **Anticipation by the Domino Defence**

94. RIM advanced an anticipation argument against the unamended claims based on The Domino Defence. Its success depended on RIM’s construction of the “HTTP ... through the firewall”: feature (v). I have rejected that construction, and so the anticipation argument fails.
95. There can be no anticipation of amended claim 1 by The Domino Defence, for the HTTP reason and because there is no smartphone (feature (x)).
96. Visto argued that there is a further distinction. It submitted that the Domino server within the DMZ is not a global server: feature (viii). It is within the outer firewall and therefore part of the LAN. I do not think this is a proper distinction from the claim. In my view it is certainly correct to regard the left-hand third of Figure 118 as a LAN. It is the network which is private and isolated from attack behind the inner firewall as Figure 117 makes clear. The Domino server on the other hand is the exposed server, again as made clear in Figure 117, protected

from attack only by a filtering router, and accessible over the Internet from the remote stations in the right-hand third.

97. Accordingly I think features (i), (ii) and (viii) of the claim are present. The differences between the disclosure of The Domino Defence and the claim are features (v) and (x), the HTTP channel through the inner firewall and the smartphone. There was no dispute that the remaining features are features of Lotus Notes as implemented in The Domino Defence. Indeed there is “synchronisation” even on Visto’s construction of that term.

## **Obviousness over The Domino Defence**

### **The skilled addressee and common general knowledge**

98. I should first identify the skilled addressee. The notional skilled addressee of the 905 Patent would be an information technology professional working in the area of communications networks and the Internet. The skilled person would obviously have to have had several years experience in dealing with communications networks, network protocols, e-mail architectures, network and security administrations. There was really no discernible difference between the parties on this.
99. I have dealt with much of the common general knowledge this person would have under the heading Technical Background above. Some matters need special mention.

### *HTTP and tunnelling*

100. It is beyond dispute that at the priority date HTTP was a generally known protocol for use on the Internet. It was known to be a generic protocol useful for transferring data of many kinds, not simply for HTML.
101. One matter which was the subject of much debate at trial was the extent to which tunnelling through firewalls using HTTP was part of the common general knowledge.
102. I should explain first what is meant by this. Tunnelling is the process of “wrapping” data which uses one protocol in a second protocol. Tunnelling can be used to traverse firewalls. If the firewall blocks a particular protocol, it may be tunnelled by being wrapped within a permitted protocol. Before the forbidden protocol gets to the firewall, it is wrapped in the permitted protocol. It crosses the firewall because the firewall recognises it as a permitted protocol. Once clear of the firewall it may be converted back.
103. Thus, if a firewall or other obstruction blocked a proprietary protocol, then another protocol which was not so obstructed could wrap the proprietary protocol and pass it through.
104. Dr Hand produced numerous examples of the use of tunnelling at the priority date. Professor Leung accepted in the end that this was a generally known technique. The concession was inevitable as it was in use in an array of commercial products and was being widely discussed at the priority date. It was not however in use for e-mail tunnelling. As I have explained, e-mails used POP3 and SMTP which had their own ports.

*Smartphones*

105. Smartphones, phones capable of accessing web servers and retrieving e-mails were well known at the date. An example was the Nokia 9000 smartphone which was launched at around that time. It was like a mini-computer: the fact that it is a telephone as well is not really relevant.

**The differences between The Domino Defence and the inventive concept**

106. I have identified the differences between The Domino Defence and the inventive concept above. They are the use of HTTP through the firewall, and the smartphone.

107. It is also the case that the arrangement set out in The Domino Defence allows the remote user to gain fully up-to-date access to his e-mail store initiated from within the firewall of the LAN. There is no necessity for the remote user to dial-up or find any way around the firewall.

**Are the differences between The Domino Defence and the inventive concept obvious?**

108. It is important that at this stage one forgets about the invention, otherwise hindsight is bound to creep in.

109. Mr Watson put his case in two ways:

- i) it is obvious to modify Lotus Notes itself by using HTTP to tunnel the e-mail through the firewall using port 80 (i.e. tunnel Notes RPC in HTTP);
- ii) It is obvious to design an “own brand version” of Lotus Notes based on The Domino architecture and use HTTP to pass the e-mail out using port 80.

110. In either case he says there would be nothing in adding a smartphone to the system as a remote terminal.

*HTTP through the firewall*

111. The first way Mr Watson puts the case is met with the objection “why would the skilled team do that?” Lotus Notes uses RPC to cross the firewall in all instances, so a licensee of Lotus Notes has his firewall configured so that RPC can pass through port 1352. Why should he start passing his e-mails through the firewall using HTTP through port 80? Despite the wide usage of Lotus Notes, there is no evidence of anyone altering the way in which their e-mails are exported.

112. RIM accepts that there was no motive, in this scenario, to make the change. But it submits that that does not matter for *Pharmacia/Hoechst* reasons. The modified system is nevertheless obvious technically: it does essentially the same thing in a different way. The technique of passing data through a firewall using HTTP was a well known tool. Why should anyone not be free to use it if the need ever arose?



113. Visto's rejoinder is this: it is not correct that HTTP tunnelling does the same thing. The use of HTTP tunnelling solves a technical problem: how one gets through the firewall without having to reconfigure it. So the *Pharmacia/Hoechst* reasoning does not apply.
114. I think these difficulties are created by fixing on a starting point where it has already been decided how the e-mail is to be transported through the firewall. If one has already decided to do something in a particular way, it will be seldom to be a logical step to retrace one's steps and do it in another way, particularly if that alternative way provides no advantage, as it would not in the case of a licensed Lotus Notes user. To say to a Lotus Notes user who has already configured his firewall that a different port is available would not solve any technical problem with which he is faced or provide him with any technical benefit. To use the familiar example: if a piece of wood is satisfactorily screwed to another, there is no reason to take it apart and glue it instead; but it is certainly not inventive to do so. And it does not make it inventive if you say that doing so avoids the technical problem of how to fix together two pieces of wood without using screws.
115. The dispute between the experts focussed on the question of lack of motivation: there was not in the end any dispute that, if forced to find another way of getting e-mail data out of the firewall, HTTP through port 80 was one obvious one. Of course there would be others, such as SMTP. In my judgment, the step of using HTTP, or indeed any other commonly enabled protocol, to cause e-mails to pass the firewall cannot be said to involve invention.
116. One can also test the obviousness case in Mr Watson's second way: faced with setting up the basic architecture of the Domino Defence document, what ways of getting e-mails and other data out through the firewall would occur to the skilled person?
117. Dr Hand's evidence was if someone were designing such a system at the priority date with similar functionality to Lotus Notes, it would have been obvious to consider HTTP as a protocol for sending e-mails to a second mail store over the internet. His reasons included the fact that
- i) HTTP had become hugely popular in the run up to the priority date and every web developer was keen to demonstrate the web friendliness of its products;
  - ii) When providing users with web-based HTTP access to their e-mails (as per Domino) it would have been obvious to consider using the same protocol to load the e-mails onto the server;
  - iii) HTTP was a generic protocol well suited to handling all the range of data which Notes handled;
  - iv) HTTP (or any other pre-existing protocol) would have been attractive because it would have allowed code re-use.

He added that the reason that HTTP was permitted to pass through firewalls (at least in the outbound direction) was that it was commonly used.

118. I think Dr Hand's reasons were cogent ones.

119. Professor Leung accepted that HTTP was a widely used generic protocol that could be used to transport any type of data and that firewalls generally permitted outgoing HTTP. He acknowledged, as he had to, that in this alternative scenario the skilled team would not be limited by the use of any proprietary protocol such as Notes RPC. He said that in these circumstances it would be obvious to use SMTP, the protocol used by the internet to transfer e-mails. But FTP (the File Transfer Protocol) and HTTP could all adequately provide the functionality required. His main point was that SMTP was the most obvious choice for e-mails, not that the other commonly used protocols would not be up to the task.
120. Looked at against this background, I do not think that the invention solves the technical problem propounded by Visto at all. The skilled person could choose amongst the available protocols to get his data out. None has any relevant technical advantage over the other. Of course he could use a proprietary protocol like Notes RPC and configure the firewall specifically to allow it through, but there would be no advantage in doing that either.
121. In my judgment the primary evidence clearly established that the use of an HTTP communications channel to export e-mails from within a LAN firewall was obvious.

*The secondary evidence*

122. Some secondary matters were relied upon by both sides. The first is RIM's own development work, a hare let loose by Mr Rybak. The second is RIM's reasons for purchase of TeamOn, the company that developed the MailConnector product alleged to infringe.
123. RIM did consider the use of HTTP in 1996 to 1997. A document dated April 1 1997 produced by Mr Rybak showed that this was so. The author of the document was Gary Mousseau, a highly inventive man who has received many awards for innovation. The document also showed that the advantages of using port 80 rather than some higher level port were appreciated: not having to go to "the MIS department" and request a new hole through the firewall.
124. Mr Rybak's evidence was that this idea was not adopted because it was or would be perceived as a "hack". However a much later document, dated 2001, suggested that it was rejected because of two technical drawbacks:
  - i) packet overhead and delay due to the polling required by HTTP; and
  - ii) in house development time and resources required to implement it.
125. I do not think anyone can get anything out of this history. That an inventive person can think of the idea does not show obviousness or inventiveness. That the idea was rejected for implementation reasons cannot help Visto: the 905 Patent only gives you the idea, and assumes that the skilled team can implement it adequately. Mr Rybak's recollection of the reason for its rejection, if it was the whole story, does not help me either. It is clear however that the HTTP option was looked at very carefully by RIM, and not rejected out of hand as a "hack". It was not established that this perception of HTTP as a "hack" formed part of the general knowledge perception of the skilled team.

126. RIM's purchase of TeamOn in 2002 was recorded in a contemporaneous document as providing "an excellent successor to our desktop redirector to deliver a corporate e-mail solution that individuals could buy without IT involvement." The document records that "This is what carriers are asking for and companies like Seven, ViAir, and Visto are delivering".
127. Mr Rybak's recollection again did not accord with the contemporaneous documents. He said that the main reason for buying TeamOn was software for accessing webmail accounts like Yahoo and Hotmail. Even if Mr Rybak's recollection is right, it does not detract from the fact that one reason for the purchase was that the system offered the ability to offer an e-mail solution that individuals could buy without IT involvement. But I do not see that this 2002 commercial perception really helps me decide the issue of technical obviousness 5 years earlier.

*smartphone*

128. In the state of computer technology that existed at the priority date it could not be inventive to replace any of the desktop computers shown in The Domino Document with any form of remote terminal, such as a smartphone. The commercially available Nokia 9000 phone had both POP 3 and Web browsing capability; so it could be used to access e-mails or other data on the Domino server.
129. Visto, supported by Professor Leung, suggested that using Lotus Notes with a smartphone would not have been technically possible in 1997 because its computational complexity would have been beyond the ability of such smartphones as existed. That reasoning was based on implementing the full functionality of Lotus Notes on the smartphone. RIM did not seriously suggest that that was something which was readily achievable in 1997. Equally, it is not what the claim requires. The claim simply requires the presence of a smartphone with a mail store. Once the relevant databases are replicated onto the Domino server, accessing them over the Internet using a smartphone like the Nokia 9000 is obvious. I can see absolutely no invention in the use of a smartphone in combination with the rest of the system in 1997.
130. Of course I should not "salami-slice" the invention, but consider the invention as a whole. Nevertheless claim 1 is clearly obvious in the light of the Domino Defence.

**Microsoft Exchange/Common General Knowledge**

131. RIM had a second attack which they ran at the trial and never formally abandoned based on Microsoft Exchange and its auto-forwarding utility. Mr Watson recognised in his closing speech, however, that he could not expect to win on Microsoft exchange if he did not win on The Domino Defence. I do not think it adds anything to his principal attack.

**Added Matter**

132. The principles to be applied to an objection of added matter are well settled: the basic test is that formulated by Aldous LJ in *Bonzel v. Intervention (No. 3)* [1991] RPC 553 at 574 namely:

The decision as to whether there was an extension of disclosure must be made on a comparison of the two documents (application as filed, patent as granted) read through the eyes of a skilled addressee. The task of the Court is threefold:

- (a) to ascertain through the eyes of a skilled addressee what is disclosed, both explicitly and implicitly in the application;
- (b) to do the same in respect of the patent as granted;
- (c) to compare the two disclosures and decide whether any subject matter relevant to the invention has been added whether by deletion or addition. The comparison is strict in the sense that subject matter will be added unless such matter is clearly and unambiguously disclosed in the application either explicitly or implicitly.

See also *Vector v Glatt* [2007] EWCA Civ 805: in particular Jacob LJ at paragraphs 2-9.

- 133. RIM submitted in a re-amended pleading which I allowed in by consent at the start of the trial, that there was no disclosure, or at least no disclosure which is clear and unambiguous, in the application for the 905 Patent of the use of HTTP to enable crossing of the firewall surrounding the first mail store. Moreover if the claim requires that HTTP be used all the way through the firewall, then that is not disclosed either. The disclosures in question were, submitted RIM, made for the first time in the claims of the granted patent.
- 134. I have reviewed the disclosure of the 905 Patent above. The parties have agreed that this disclosure reproduces in all material respects (other than the claim) the disclosure of the application. I have come to the conclusion that there is a clear and unambiguous teaching of using HTTP to go through (and all the way through) the firewall around the LAN. I therefore conclude that the 905 Patent is not bad for added matter.

### **Insufficiency**

- 135. Although a number of insufficiencies were pleaded, they were said by Mr Watson in opening to be by way of squeezes, in anticipation of various ways in which Visto might put its case. In the event, none of the anticipated arguments emerged, and Mr Watson did not press any insufficiency on me in his closing speech. I therefore say no more about it.

### **Not an invention**

- 136. Section 1(2) of the Patents Act 1977 (which enacts Article 52(2) and (3) of the European Patent Convention) provides, so far as relevant:

“(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 –

- (c) ...a program for a computer...

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 relates to that thing as such.”

137. The concluding words are important: the exclusion only bites if the invention is only a computer program. The mere fact that an invention involves a computer program in some way does not exclude it from patentability. The law relating to the subject matter exclusions in section 1(2) has recently been reviewed by the Court of Appeal in *Aerotel v. Telco* and *Macrossan's Application* [2007] RPC 7. The Court of Appeal there accepted the submission of counsel for the Comptroller that the correct approach to these issues was in four stages:
- (i) properly construe the claim;
  - (ii) identify the actual contribution;
  - (iii) ask whether it falls solely within the excluded subject matter;
  - (iv) check whether the contribution is actually technical in nature.

In paragraph 43, Jacob LJ, who gave the judgment of the Court, said this:

“The second step –identify the contribution – is said to be more problematical. How do you assess the contribution? Mr Birss [counsel for the Comptroller] submits the test is workable – it is an exercise in judgment probably involving the problem to be solved, how the invention works, what its advantages are. What has the inventor really added to human knowledge perhaps best sums up the exercise. The formulation involves looking at substance not form – which is surely what the legislature intended.”

138. I have construed the claim above. In assessing novelty and inventive step I have identified what may be said to have been added to human knowledge: the idea of communicating e-mails through a LAN firewall using HTTP, and combining the system with a smartphone. I have also endeavoured to clothe that contribution with the advantages which might be said to flow from the combination of features insofar as they are consistent with my construction of the claim. In particular I have recognised that the invention passes the e-mails through a different port from the prior art, one which exists in typical firewalls. Although it is tempting to think of firewalls as physical obstructions, a firewall is in fact no more than a software routine running on a computer. I have also recognised that the combination of the Domino system with a smartphone was novel.
139. Mr Watson submitted that the arrangement of hardware called for by the claim was all standard known hardware. All that was required to make the invention was to program the computer accordingly. One can see that, he says, because claim 40 of the unamended patent was to a “computer readable medium storing program code” to perform the claimed method.
140. Both parties referred to the facts of the two appeals before the Court in *Aerotel*: the first by *Aerotel* and the second by Mr Macrossan. The difference in result in the two appeals was said to illustrate the application of the test. In the *Aerotel* appeal ([50]-[57]), the apparatus claimed in claim 1 was said to be a method of doing business as such. Although it was made up from conventional components, as a whole it was held that the claimed apparatus was new (paragraphs 51-53). It was more than just a method of doing business. That finding has to be

understood against the Court of Appeal's rejection of the "any hardware" approach see [26] and its conclusion that the objection goes to substance and not form.

141. The *Macrossan* appeal ([58]-[74]) was a system that would produce company formation documents using standard computer hardware. The Court of Appeal held that the claim was to computer software as such because the contribution was to provide a computer program which could be used to carry out the claimed method ([73]).
142. Mr Watson submitted that the present case was on the *Macrossan* side of the line. Mr Carr submitted with equal force that the present case was on the *Aerotel* side. For my part I do not think that this is a helpful way to proceed. The two cases were concerned with different exceptions to patentability; and comparisons on the facts of this kind are not always helpful. I prefer to look at the matter in the way Pumfrey J put it in *shopalotto.com's Application* [2005] EWHC 2416 at [9], when he said

"Suppose a program written for a computer that enables an existing computer to process data in a new way and so to produce a beneficial effect, such as increased speed, or more rapid display of information. It is difficult to say these are not technical effects..... The real question is whether this is a relevant technical effect, or, more crudely, whether there is enough technical effect: is there a technical effect over and above that to be expected from the mere loading of a program into a computer? From this sort of consideration there has developed an approach that I consider to be well established on the authorities, which is to take the claimed computer, and ask what it contributes to the art over and above the fact that it covers a programmed computer. If there is a contribution outside the list of excluded matter, then the invention is patentable, but if the only contribution to the art lies in excluded matter, it is not patentable."

143. I have concluded that the contribution does lie solely in excluded matter.
144. Firstly, I do not think that asking the question posed by Mr Watson as to how the invention could be made is the correct approach to the exclusion in law. There may be many inventions which only require the programming of a computer to make them. The question is: what technical results flow from the invention, not what steps are required to be taken to make it.
145. Secondly, the fact that it is possible to claim the invention as a program on a disc is not dispositive of the question: see Kitchin J in *Astron Clinica* [2008] EWHC 85 (Pat).
146. Thirdly, I think the claim is directed to a new combination of hardware. The addition of a smartphone to the Lotus Domino combination is one indicator of this. But "any new hardware" is not enough: and the fact that the smartphone is a telephone as well as a computer is, as a matter of substance (rather than form) not relevant to the contribution. It is just a small computer.
147. Fourthly, I should bear in mind the fact that the claim defines the way in which, within the new combination, data is transmitted. The claim requires, for example, initiation of synchronisation to occur within one element of the combination, and for data to be transmitted to a second

element. Although this is not novel in itself, it is novel within the new combination. But this is simply the effect of running the program on the computers. It is providing for data to be delivered from one element to another, so that the data is accessible to a user at another computer. That is exactly the sort of thing that computers do when programmed. It does not seem to me that that is enough of a technical effect to render the invention patentable.

148. Claim 1 is bad for offending section 1(2). Claim 18 is broader, and falls foul of the section as well.

### **Infringement**

149. The BlackBerry System is described in the First and Second Product and Process Descriptions dated 19<sup>th</sup> December 2006 and 8<sup>th</sup> May 2007 and in a supplementing letter from RIM’s solicitors dated 29<sup>th</sup> July 2007.

150. BlackBerry offer a number of different “solutions” to subscribers. Only one of these, the BlackBerry Internet Solution (“BIS”), is relevant to infringement. This is illustrated in the figure below, taken from the First PPD:

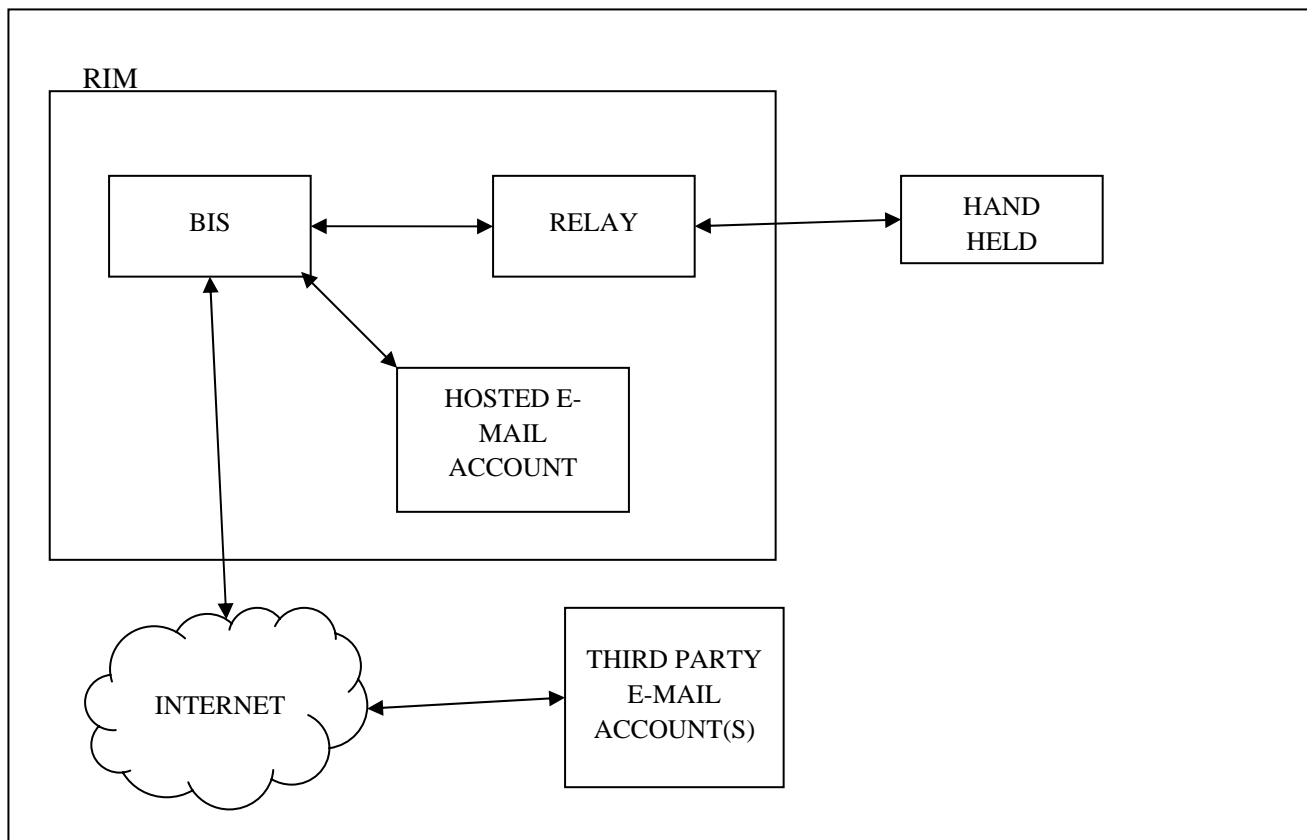
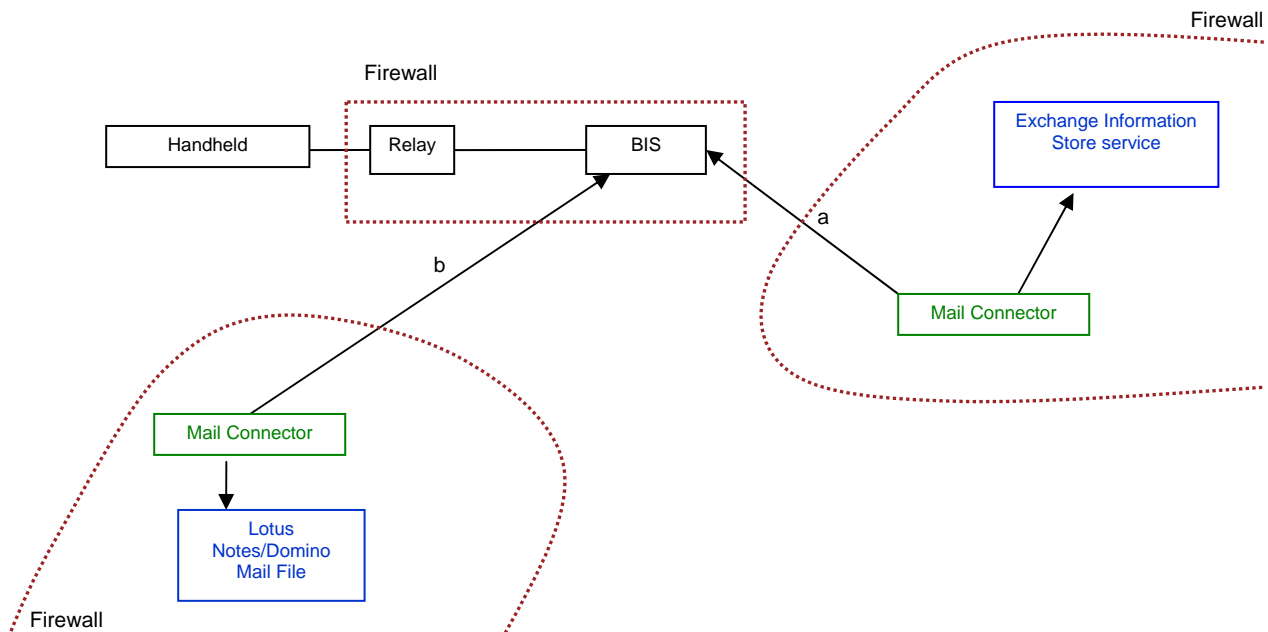


Figure 2: The BIS System (illustrated for an individual user)

151. The BIS is able to obtain e-mails from certain third-party e-mail accounts and to send those e-mails to a user's handheld BlackBerry.
152. E-mail accounts that can be integrated with the BIS for these purposes include Yahoo Mail, Google Mail, Hotmail and corporate Microsoft Exchange and Lotus Domino servers. The BIS is then able to communicate with servers over the Internet and use their functionality to obtain e-mails from them.
153. As can be seen, the BIS can communicate directly with third-party e-mail servers. No suggestion of infringement is made if this arrangement is used.
154. As an alternative to establishing a connection directly with the third-party e-mail account, the Mail Connector can be set up as a proxy for the BIS. The Mail Connector functions as a link between the BIS and the user's e-mail account, as shown below for two examples of third party e-mail accounts.



155. The sequence by which a new mail arriving at the Exchange Information Store service is obtained by the BIS via the Mail Connector is as follows :
- a) **Step 1:** Communication between the Mail Connector and the BIS begins with an MC Request from the Mail Connector. The Mail Connector continually issues MC Requests to the BIS at intervals of the order of milliseconds.



- b) **Step 2:** The BIS then sends a response to the Mail Connector (an MC Response), which includes a request to the Exchange Information Store for a list of messages (The BIS List Request).
- c) **Step 3:** In response to the BIS List Request, the Exchange Information Store service provides the Mail Connector with a list of message IDs. The Mail Connector then passes the BIS List Response to the BIS in the format of an HTTPS POST command.
- d) **Step 4:** Having received the BIS List Response including the list of message IDs, the BIS identifies those messages that it has not previously processed.
- e) **Step 5:** In response to one of the MC Requests continually issued to the BIS by the Mail Connector, the BIS then issues a further Mail request to the Mail Connector to obtain an e-mail, say e-mail “A”. This request is sent as the payload of an MC Response, and the Mail Connector duly passes the “BIS Fetch A Request” to the Exchange Information Store service.
- f) Upon receiving the “BIS Fetch A Request”, the Exchange Information Store service provides the Mail Connector with, in the example, e-mail A. The Mail Connector then (having converted it from MAPI to WebDAV Mail) passes it to the BIS by way of an “HTTPS POST A” command.

156. The above is illustrated in a figure taken from the PPD:

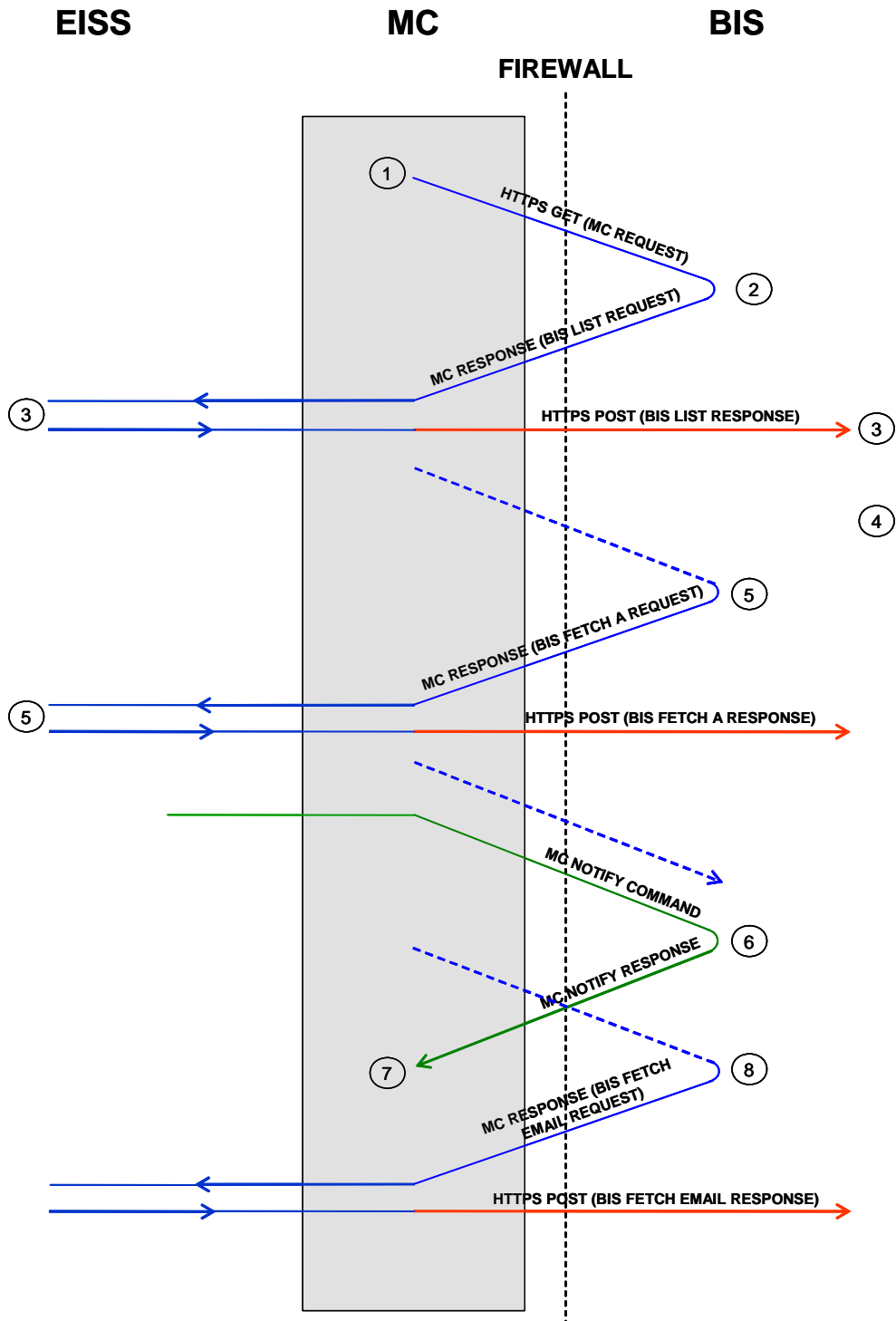


Figure B: Communication with an Exchange Information Store service using the Mail Connector as a simple proxy. The reference to EISS in Figure B is to the Exchange Information Store service.

157. An MC Request may not necessarily be answered immediately. This is because the BIS operates a cycle of regular periodic polling of the Exchange Information Store service (via the Mail Connector). The BIS therefore only responds to an MC Request when a poll is due and will hold open the connection until such a poll is performed. If an MC Request is terminated before a response from the BIS, the Mail Connector will issue a fresh MC Request.
158. In addition to the polling process, the BIS is also able to respond to “notifications” issued by the Exchange Information Store service provided the as BIS first registers, via the Mail Connector, with the Exchange Information Store service for new mail events. It then receives notifications whenever a notification event takes place (which occurs when a new e-mail arrives at the Exchange Information Store service or when changes to metadata such as folder location occur).
159. The steps which occur (also illustrated in the Figure reproduced above) are:
- a) **Step 6:** Notifications received by the Mail Connector relating to new e-mails are communicated to the BIS via HTTP NOTIFY commands.
  - b) **Step 7:** The BIS acknowledges a notification by issuing a response to the MC Notify Command (an MC Notify Response).
  - c) **Step 8:** An MC Notify Command prompts the BIS via the Mail Connector to poll the Exchange Information Store service thereby making use of a pending MC Request. This polling takes place in exactly the same way as the BIS's regular polling for the message IDs of e-mails in the user's inbox).
  - d) If no MC Notify Command has been issued by the Mail Connector after an MC Request, the BIS simply waits until a poll is due under the regular cycle to issue an MC Response to an MC Request.
160. Mr Rybak was the witness called by RIM to verify the PPD. In his second witness statement he explained that where the BIS is registered via the Mail Connector for new e-mail events, the BIS slows down its regular polling to once about every 6 hours. He confirmed in evidence that this meant that for 99% of the time the NOTIFY command was what e-mails were sent in response to.

**Infringement – “operable to initiate synchronization from within the firewall”**

161. Visto’s case is that the NOTIFY command is what initiates e-mail synchronisation: and that command goes from the Mail Connector to the BIS. On this basis Visto submitted that the feature is present.

162. RIM contends that the NOTIFY command is causally too remote from the actual sending of the e-mail to satisfy this feature of the claim. RIM also contends that if it is legitimate to go as far back in the process as the NOTIFY command, then it is also legitimate to look at the registration step which proceeds NOTIFY, which comes from the BIS.
163. I accept Visto's submission on this feature.
164. Firstly, as I said when dealing with the meaning of this feature, the important question is whether the system is operable to get the e-mails out from within the LAN without the remote user having to try and negotiate a way through the firewall. It can be seen that this is what the NOTIFY command does. It ensures that the BIS is regularly updated with e-mails arriving at the Exchange Information Store. No user request is involved.
165. Secondly, the skilled person would not understand that the invention was concerned with the causal proximity of the act of initiation with the sending of the e-mail. He would understand that the purpose of the limitation was to make it clear that initiation did not have to come from elsewhere.
166. Thirdly, the fact that there is a requirement to register with this service which emanates from the BIS does not in my view affect the position. Registration does not, in any real sense, initiate.
167. Finally I should mention some evidence that Dr Hand gave that the NOTIFY command was simply a "hint", which did not affect the fact that that much of the control of synchronisation was in the hands of the BIS. I am not sure that it was ever correct so to describe the NOTIFY command; but once it is understood that the NOTIFY command effectively stalls the BIS' normal polling process, the point became untenable. Dr Hand recognised that this was so.
168. Mr Watson submitted in his final speech that if Visto were correct on the construction of "synchronisation" in that it required bi-directional synchronisation, then there was no evidence that that feature was present in the RIM system.
169. As I have rejected Visto's construction of synchronisation, the point does not arise. However it is a matter of some concern that in litigation of this substance the court should be left with practically no evidence on an issue which it is asked to decide. In case the matter goes further I should set out the sequence of events to which my attention was drawn, and what my conclusions would have been.
170. I should first point out that the procedure pursuant to CPR Part 63.8 paragraph 5.1 of the Practice Direction supplementing Part 63 which absolves a party who provides "full particulars of the product or process alleged to infringe" (i.e. a PPD) from giving disclosure on infringement is not intended to absolve a patentee from the burden of proving infringement. This problem is particularly acute where the patentee intends to advance a particular narrow

construction of a claim (perhaps to avoid prior art) which is not immediately apparent to his opponent when providing the PPD. The opponent gives a sufficient description to show that the broadly construed feature is present in the alleged infringement, but omits any further detail to enable the court to determine whether the narrowly construed feature is present, because he does not consider it relevant. If the procedure by way of PPD is to continue to work, the burden then falls on the patentee to ask for the necessary further details. The patentee cannot expect the opponent to guess every possible construction that he might choose to place on his claim. The same is true if the Defendant intends to argue for a particular construction - he too must ensure that the PPD contains sufficient detail for the case which he plans to advance. He cannot spring his own construction on the patentee at the trial, and cry "no evidence".

171. The difficulty for the court when faced with these points is to determine where the fault for the deficiency in the PPD truly lies. Was it the patentee keeping his narrow construction up his sleeve; or his opponent doing the same?
172. In the present case the issue of what was meant by synchronisation did not arise until the application to amend which was made by application notice on 27<sup>th</sup> September 2007. By then the Second PPD had been served and supplemented by a letter of 27<sup>th</sup> July 2007. RIM had not asked for any details about whether the synchronisation was bi-directional.
173. The Primer is dated 6<sup>th</sup> December 2007, but as I have held, it did not really address the finer detail of the meaning of synchronisation. In paragraph 24 of his first expert report dated 12<sup>th</sup> November 2007, Professor Leung explained various aspects of synchronisation. However, he did not make clear here that his understanding of synchronisation was that it necessarily included bi-directional. On the contrary he said that:

"The modes of synchronisation available and in use in 1997 depended on what precisely was being synchronised. For synchronisation of e-mail (which is not specifically discussed in the Primer), in 1997 the most common methodology would involve establishing a dial-up connection using a portable device such as a laptop (for example, from a hotel telephone) to the employer's corporate server in order to download the user's e-mail messages."

Mr Carr relied on this paragraph as making Visto's position as advanced at trial clear. In my view it did not.

174. A careful reader of Professor Leung's report would have observed that at paragraphs 119-121 he appeared to suggest, when distinguishing the prior art that synchronisation in Visto's patent needed both to be bi-directional and to include metadata. But Professor Leung dealt with infringement of this feature in paragraphs 196 – 201 of his first report. He focussed on how the initiation of the sending of an e-mail took place. He did not make any points which implied that bi-directional or metadata synchronisation were present or

necessary. His report therefore sent out mixed messages about how Visto would ultimately put their case on construction.

175. Dr Hand dealt with infringement in paragraphs 88-91 of his first report dated 12<sup>th</sup> November 2007. He did not suggest that there was no synchronisation.
176. RIM's opening skeleton argument showed that they were alerted by paragraphs 119-121 of Professor Leung's first report to the possible attempt by Visto to distinguish the prior art by a narrow reading of synchronisation:

“In places, Prof Leung appears to suggest that synchronisation requires more than even this and in particular that it requires 2-way synchronisation in which the smartphone is able to send information back to the 1<sup>st</sup> mail store. See for example Leung 1 paragraph 119-121. However, there is no requirement in the claim for bidirectional synchronisation and the 905 Patent does not teach how it would be done. See Hand 3 paragraph 26.”

I think this paragraph fairly summarises what RIM could be expected to glean from Professor Leung's report.

177. Mr Carr says one could tell from some of the drawings of the BIS in evidence that the BIS does indeed employ bi-directional e-mail synchronisation. He deduces this from the presence of double headed arrows on the lines connecting the various components. I do not think that an adequate basis on which to make a finding of infringement: it is not clear to me that the arrows are really intending to indicate two-way synchronisation.
178. In my view, once Visto appreciated that it might be going to argue for a narrow construction of its amendment, it should have reviewed the PPD and its evidence to make sure that it was adequate to cover the point. This they did not do. I do not think that, on this particular aspect, RIM's preparation of the PPD is at fault. I should add that, as the way in which information about the NOTIFY command came out, RIM have nothing to be proud about so far as the document as a whole is concerned.
179. It follows that I am thrown back on the burden of proof. If Visto are correct on construction of “synchronisation” I would have held that RIM did not infringe.

### **Infringement – global server**

180. Although it was originally argued by RIM that the BIS did not have a sufficiently robust mail store for a global server, that point had disappeared from RIM's primary case by the time the case was opened.
181. RIM's main point on this feature is that the BIS is not accessible in the way the global server is required to be. It submitted that the global server is required to be globally accessible and that the BIS was not so accessible to retrieve e-mail.

182. There are two reasons why I reject this non-infringement argument. Firstly, as I have construed the claim the requirement for a global server does not carry any specific requirement as to how it is accessed by users. The claim focuses on the relationship between the LAN and the global server: the latter must be able to receive e-mails and store them. Otherwise it contains no requirements as to how the e-mails are obtained thereafter by the user. So the point fails as a matter of construction.
183. Secondly, I do not think this point is really open to RIM. The PPD simply does not contain sufficient detail to enable one to decide the point on RIM's construction. Mr Watson sprang a few questions on Professor Leung in cross examination. His answers were that he really did not know. If this was a serious point, the manner in which the BlackBerry user obtains his e-mails should have been described fully in the PPD. At the very least a statement of the negative proposition advanced ought to have been there, to alert Visto that the point was being taken.

#### **Infringement – order of steps**

184. RIM submitted that “order of steps” in claim 1 would be significant to the skilled reader, and that these differed in the BIS. I think this submission ignores the fact that it is not a method claim. There are no steps which are required to occur in any particular order.

#### **Infringement – determining means**

185. RIM also submitted that the various means required were to be located within the LAN. There is nothing in the claim to require that they should be.

#### **Conclusion on infringement**

186. None of RIM's points on non-infringement succeed on the claims as I have construed them. If Visto is right on the construction of “synchronisation” it has not proved infringement.

#### **Result**

187. The 905 Patent as proposed to be amended is invalid for lack of inventive step and because it claims a computer program as such but, if valid, would be infringed by the RIM Mail Connector.
188. The objections of added matter and insufficiency fail.