



**PATENTS ACT 1977**

BETWEEN

|                  |           |
|------------------|-----------|
| Caterpillar Inc. | Claimant  |
| and              |           |
| Joseph Vögele AG | Defendant |

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PROCEEDINGS

Application under Section 72 of the Patents Act 1977 to revoke Patent No EP (UK)  
2514873 B1

HEARING OFFICER                      Julyan Elbro

Mr Graham Murnane and Wendy Crosby of Murgitroyd & Company for the claimants  
Tom St Quintin of Hogarth Chambers for the defendants

Hearing date: 03 November 2015

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**DECISION**

**Introduction**

- 1 An application for revocation of patent number EP (UK) 2514873 B1 in the name of Joseph Vögele AG (“the defendant”) was made by Caterpillar Inc. (“the claimant”) on 17 December 2014 under s.72 of the Act. The patent was originally published in German (with an English version of the claims as is usual for the European Patent Office).
- 2 The defendant filed a counterstatement on 9 February 2015 with one set of unconditional amendments and a further set of conditional amendments made under s.75 of the Act. The claimant subsequently filed a full English translation of the granted specification on 10 March 2015.
- 3 The claimant’s skeleton arguments were filed on 22 October 2015 and defendant’s skeleton arguments on 23 October 2015.
- 4 The substantive matter came before me at a hearing on 3 November 2015 where the claimants were represented by Mr Graham Murnane and Wendy Crosby of Murgitroyd & Company and the defendants were represented by Tom St Quintin of Hogarth Chambers.

## The Patent

5 The invention is based on the idea that it is advantageous for the quality of the prepared road surface to control the logistics of the laying process using the “pull principle” in which the focus is on the road finishing machine that lays the road surface. The road finishing machine sends request commands to the mixing plant which generates the laying material, allowing the production rate or temperature to be adjusted to ensure that the laying material is provided to the finishing machine in good condition. This enables the laying process to be as uniform as possible, mitigating for influences such as the weather, traffic jams, breaks or work related changes in speed of the road finishing machine and avoids the production of too much laying material to the site which cannot be laid or alternatively prevents the laying equipment coming to a standstill through lack of material.

6 The translation into English of granted claim 1 reads as follows:

1) Method of applying a road surface (2) using at least one mixing plant (3) for producing laying material (4), a road finishing machine (7) processing the laying material (4) to a road surface (2), and a supply chain (5) transporting the laying material (4) from the mixing plant (3) to the road finishing machine (7), **characterized in that** request commands are transmitted from the road finishing machine (7) to the mixing plant (4), depending on these request commands, the production rate of the laying material (4) in the mixing plant (3) and/or the temperature of the laying material (4) produced in the mixing plant (3) are adjusted.

7 The English translation of independent claim 10 reads as follows:

10) System (1) for applying a road surface (2) with a road finishing machine (7) for applying a road surface (2) of laying material (4), a mixing plant (3) for producing the laying material (4), and a supply chain (5) for transporting the laying material (4) from the mixing plant (3) to the road finishing machine (7), **characterized in that** the road finishing machine (7) comprises a control (17) with a communication module (20) which is adapted to generate request commands and transmit them, via a communication channel (8) to the mixing plant (3) and that the mixing plant (3) is adapted to adjust, depending on these request commands, the temperature of the laying material (4) produced in the mixing plant (3) and/or the production rate of the laying material (4) in the mixing plant (3).

8 The claimant helpfully provided notation to delineate the separate features of the main claims, the unconditional and conditional amendments in order to facilitate discussion. I use this notation in discussion of the issues in the main claims:

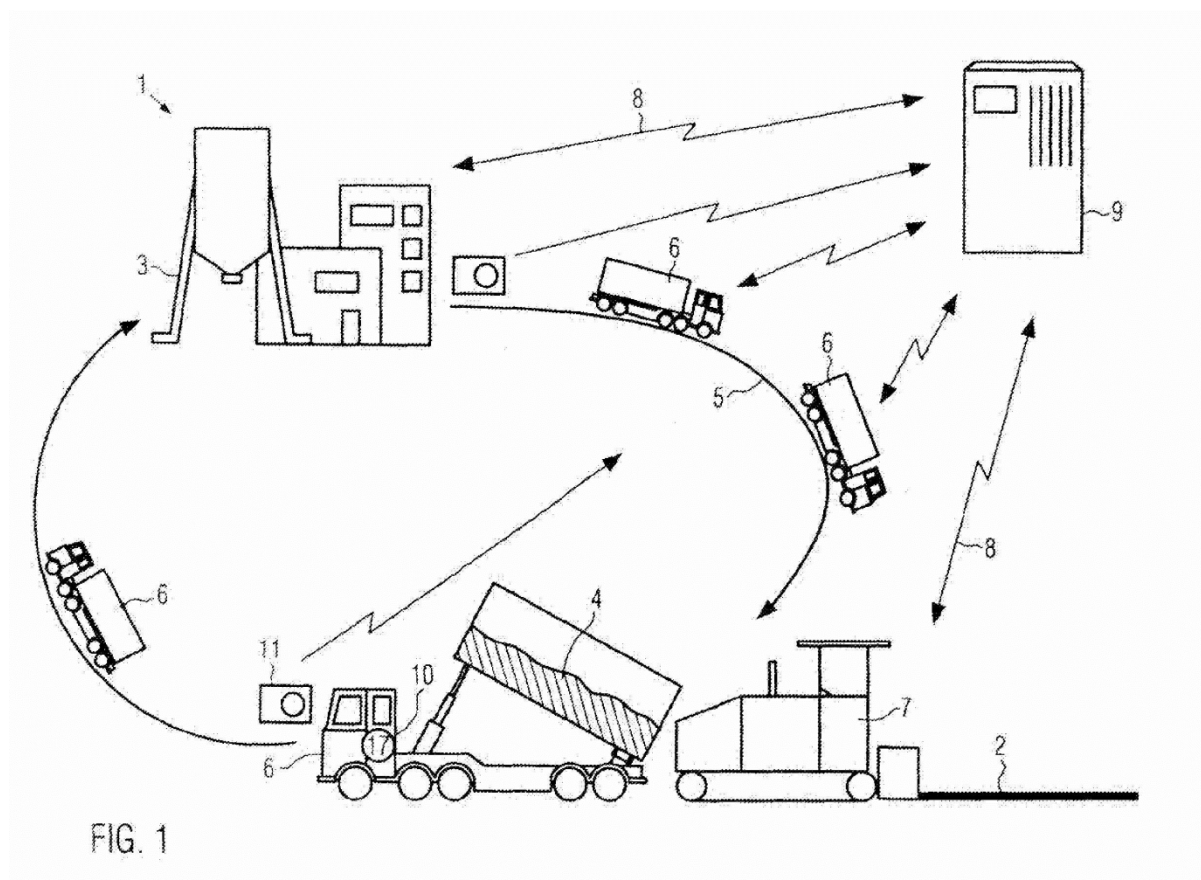
| Claims as granted   | Claims of unconditional offer to amend 9/2/15   |
|---|---|
| 1) (A) Method of applying a road surface (2) using at least one mixing plant (3) for producing laying material (4), a road finishing machine (7) processing the laying material (4) to a road surface (2), and a supply chain (5) transporting the laying material (4) from the mixing plant (3) to the road finishing machine (7), | 1) (A) Method of applying a road surface (2) using at least one mixing plant (3) for producing laying material (4), a road finishing machine (7) processing the laying material (4) to a road surface (2), and a supply chain (5) transporting the laying material (4) from the mixing plant (3) to the road finishing machine (7), |
| characterized in that   | <del>characterized in that</del>  |

|  |  |
|--|--|
| (B) request commands are transmitted from the road finishing machine (7) to the mixing plant (4),  | (B) wherein request commands are transmitted from the road finishing machine (7) to the mixing plant (4),  |
| (C) depending on these request commands, the production rate of the laying material (4) in the mixing plant (3) and/or the temperature of the laying material (4) produced in the mixing plant (3) are adjusted.   | (C) depending on these request commands, the production rate of the laying material (4) in the mixing plant (3) and/or the temperature of the laying material (4) produced in the mixing plant (3) are adjusted,   |
|  | characterized in that<br>(C1) a feedback on the condition of the mixing plant is given to the road finishing machine(7)  |
| 10) (D) System (1) for applying a road surface (2)   | 10) (D) System (1) for applying a road surface (2)   |
| (E) with a road finishing machine (7) for applying a road surface (2) of laying material (4), a mixing plant (3) for producing the laying material (4), and a supply chain (5) for transporting the laying material (4) from the mixing plant (3) to the road finishing machine (7), | (E) with a road finishing machine (7) for applying a road surface (2) of laying material (4), a mixing plant (3) for producing the laying material (4), and a supply chain (5) for transporting the laying material (4) from the mixing plant (3) to the road finishing machine (7), |
| characterized in that<br>(F) the road finishing machine (7) comprises a control (17) with a communication module (20)  | <del>characterized in that</del><br>(F) the road finishing machine (7) comprises a control (17) with a communication module (20)   |
| (G) which is adapted to generate request commands and transmit them, via a communication channel (8) to the mixing plant (3)   | (G) which is adapted to generate request commands and transmit them, via a communication channel (8) to the mixing plant (3)   |
| and that<br>(H) the mixing plant (3) is adapted to adjust, depending on these request commands, the temperature of the laying material (4) produced in the mixing plant (3) and/or the production rate of the laying material (4) in the mixing plant (3).                           | and <del>that</del><br>(H) the mixing plant (3) is adapted to adjust, depending on these request commands, the temperature of the laying material (4) produced in the mixing plant (3) and/or the production rate of the laying material (4) in the mixing plant (3).                |
|  | characterised in that<br><br>(H1) characterized in that the system (1) is adapted such that a feedback on a condition of the mixing plant (3) is given to the control (17) of the road finishing machine (7) via the communication channel (8).                                      |

|   |   |
|---|---|
| Claims as granted   | Claims of conditional offer to amend<br>9/2/15  |
| 1) (A) Method of applying a road surface (2) using at least one mixing plant (3) for producing laying material (4), a road finishing machine (7) processing the laying material (4) to a road surface (2), and a supply chain (5) transporting the laying material (4) from the mixing plant (3) to the road finishing machine (7), | 1) (A) Method of applying a road surface (2) using at least one mixing plant (3) for producing laying material (4), a road finishing machine (7) processing the laying material (4) to a road surface (2), and a supply chain (5) transporting the laying material (4) from the mixing plant (3) to the road finishing machine (7), |
| characterized in that<br>(B) request commands are transmitted from the road finishing machine (7) to the mixing plant (4),  | <del>characterized in that</del><br>(B) wherein request commands are transmitted from the road finishing machine (7) to the mixing plant (4),   |

|   |   |
|---|---|
| <p>(C) depending on these request commands, the production rate of the laying material (4) in the mixing plant (3) and/or the temperature of the laying material (4) produced in the mixing plant (3) are adjusted.</p>   | <p>(C) depending on these request commands, the production rate of the laying material (4) in the mixing plant (3) and/or the temperature of the laying material (4) produced in the mixing plant (3) are adjusted,</p>   |
|   | <p>characterized in that<br/> (C1) a feedback on the condition of the mixing plant is given to the road finishing machine(7)<br/> <br/> (C2) and in that at least on operating parameter of the road finishing machine (7) is adjusted depending on the feedback of the mixing plant (3).</p>                                     |
| <p>10) (D) System (1) for applying a road surface (2)</p>   | <p>10) (D) System (1) for applying a road surface (2)</p>   |
| <p>(E) with a road finishing machine (7) for applying a road surface (2) of laying material (4), a mixing plant (3) for producing the laying material (4), and a supply chain (5) for transporting the laying material (4) from the mixing plant (3) to the road finishing machine (7),</p> | <p>(E) with a road finishing machine (7) for applying a road surface (2) of laying material (4), a mixing plant (3) for producing the laying material (4), and a supply chain (5) for transporting the laying material (4) from the mixing plant (3) to the road finishing machine (7),</p>                                       |
| <p>characterized in that<br/> (F) the road finishing machine (7) comprises a control (17) with a communication module (20)</p>  | <p><del>characterized in that</del><br/> (F) the road finishing machine (7) comprises a control (17) with a communication module (20)</p>   |
| <p>(G) which is adapted to generate request commands and transmit them, via a communication channel (8) to the mixing plant (3)</p>   | <p>(G) which is adapted to generate request commands and transmit them, via a communication channel (8) to the mixing plant (3)</p>   |
| <p>and that<br/> (H) the mixing plant (3) is adapted to adjust, depending on these request commands, the temperature of the laying material (4) produced in the mixing plant (3) and/or the production rate of the laying material (4) in the mixing plant (3).</p>                         | <p>and <del>that</del><br/> (H) the mixing plant (3) is adapted to adjust, depending on these request commands, the temperature of the laying material (4) produced in the mixing plant (3) and/or the production rate of the laying material (4) in the mixing plant (3).</p>  |
|   | <p>characterised in that<br/> <br/> (H2) characterized in that the control (17) is adapted to automatically adjust the laying speed and/or at least one other operating parameter of the road finishing machine (7) depending on a feedback on a condition of the mixing plant (3) received via the communication channel (8)</p> |

- 9 These features are broadly illustrated in figure 1 of the application, with the reference numbers as given in the claims:



### The Law

- 10 The law in this case was not in dispute. The revocation action was brought under sections 72(1)(a) – the invention is not a patentable invention, specifically that it lacked novelty and or an inventive step and 72(1)(d) added matter. Excerpts of the relevant sections of the Patents Act 1977 are set out below:

#### Novelty

2.-(1) An invention shall be taken to be new if it does not form part of the state of the art.

#### Inventive step

3. An invention shall be taken to involve an inventive step if it is not obvious to a person skilled in the art, having regard to any matter which forms part of the state of the art by virtue only of section 2(2) above (and disregarding section 2(3) above).

#### Power to revoke patents on application

72.-(1) Subject to the following provisions of this Act, the court or the comptroller may by order revoke a patent for an invention on the application of any person (including the proprietor of the patent) on (but only on) any of the following grounds, that is to say –

- (a) the invention is not a patentable invention;

...

(d) the matter disclosed in the specification of the patent extends beyond that disclosed in the application for the patent, as filed, or, if the patent was granted on a new application filed under section 8(3), 12 or 37(4) above or as 55 mentioned in section 15(9) above, in the earlier application, as filed;

11 What constitutes an inventive step was considered by Lord Hoffman in *Biogen v Medeva* [1997]RPC 1 at 34:

“Whenever anything inventive is done for the first time it is the result of the addition of a new idea to the existing stock of knowledge. Sometimes, it is the idea of using established techniques to do something which no one had previously thought of doing. In that case the inventive idea will be doing the new thing. Sometimes it is finding a way of doing something which people had wanted to do but could not think how. The inventive idea would be the way of achieving the goal. In yet other cases, many people may have a general idea of how they might achieve a goal but not know how to solve a particular problem which stands in their way. If someone devises a way of solving the problem, his inventive step will be that solution, but not the goal itself or the general method of achieving it.”

12 The structured test is set out in *Pozzoli SPA v BDMO SA* [2007] FSR 37 at 23, elaborating on that laid down in *Windsurfing International v Tabur Marine* [1985] RPC 59:

- 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.

13 As I explain further below, the defendant also raised an issue regarding the late raising of many of the claimant’s arguments and their absence from the statement of claim. The relevant paragraphs of the patents rules are:

**Overriding objective**

74.—(1) The rules in this Part set out a procedural code with the overriding objective of enabling the comptroller to deal with cases justly.

**Starting proceedings**

76.—

(4) A statement of grounds must—

- (a) include a concise statement of the facts and grounds on which the claimant relies;

**Added Matter**

14 The claimant raised two sets of added matter objection: an objection to the claims as originally granted (which was in the statement of case), an objection to the amended forms of the claims (which were not)

Objection to the originally granted claims

- 15 The claimant argued that the claims as originally granted added matter to the specification compared to the claims as filed. As the features of the granted claims are also present in the amended forms of the claims, this objection applied equally to the claims as proposed to be amended.
- 16 Claim 1 as filed read as follows:
1. Method of applying a road surface (2) using at least one mixing plant (3) for producing laying material (4), a road finishing machine (7) processing the laying material (4) to a road surface (2), and a supply chain (5) transporting the laying material (4) from the mixing plant (3) to the road finishing machine (7),  
**Characterized in that** request commands are transmitted from the road finishing machine (7) to the mixing plant (4) and/or to the supply chain (5), and that, depending on these request commands, the production rate of the laying material (4) in the mixing plant (3), the temperature of the laying material (4) produced in the mixing plant (3) and/or the mass flow of laying material (4) supplied to the road finishing machine (7) per time unit by the supply chain (5) is adjusted.
- 17 Compared to the original claim 1, it can be seen that the claim has been narrowed so as to exclude request commands to the supply chain (as opposed to the mixing plant) and to exclude the parameter adjusted being the mass flow of laying material supplied (as opposed to temperature or production rate). In the original claim, these options were presented using “and/or” meaning they could be both alternatives or combined – a possible 21 alternatives.
- 18 The claimant argued that this amounted to combining one or more specific pairs from two lists (the first list being “commands to the supply chain”, “commands to the mixing plant”; the second list being “adjust production rate”, “adjust temperature”, “adjust mass flow”) which under EPO case law<sup>1</sup> was a new selection (from the 21 possibilities) and hence added matter. It argued that according to T783/09<sup>2</sup> it is impermissible to base a claim on a selection of a small number of single elements from each of two separate lists of elements, unless the elements are selected from a list of qualitatively equal elements – clearly not the case here as the members of the list are very distinct entities or parameters.
- 19 The defendant pointed to the test given by Jacob LJ on appeal in *European Central bank v Document Security Systems Inc* [2008]EWCA Civ 192 and argued that the final lines of paragraph 101 of that judgement apply in the current case: “If... the feature merely excludes protection for part of the subject matter of the claimed invention as covered by the application as filed, the adding of such a feature cannot reasonably be considered to give any unwarranted advantage to the applicant. Nor does it adversely affect the interests of third parties”. They also highlighted the passage in *Palmas’s European Patents* [1999] RPC 47 in which Pumfrey J said “If the specification discloses distinct sub-classes of the overall inventive concept, then it should be possible to amend down to one or other of the sub-classes, whether or not they are presented as inventively distinct in the specification before amendment. The difficulty comes when it is sought to take features which are only disclosed in a particular context and which are not disclosed as having any inventive significance and introduce them into the claim deprived of that context. This is a process sometimes called ‘intermediate generalisation’.”

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<sup>1</sup> T12/81 Bayer

<sup>2</sup> T783/09 Novartis

- 20 Specifically, the defendant argued that it is necessary to assess what the skilled addressee would have understood the application as filed to have meant and that the conjunction and/or would have been very easily understood by the skilled addressee to mean “A” on its own is disclosed; “B” on its own is disclosed and “A and/or B together are disclosed. As a consequence, the defendant argued, narrowing from one of those possibilities to a more limited subset does not add any matter. The defendant also pointed out that some of the original 21 combinations were not meaningful – for example, transmitting a request to the supply chain to alter the temperature of material produced at the mixing plant – and that the skilled person would have comprehended the true meaning of the claim excluding those.
- 21 I agree with the defendant. This is not an analogous situation to a chemical selection where a large range of chemicals are narrowed down in a way that would not have been apparent from the original specification. Instead, it is clear in the original claim that either one sends instructions to the mixing plant to change temperature or production rate, and/or to the supply chain to change the mass flow of material supplied. Choosing to limit to one of these clearly defined possibilities does not add matter. It is undoubtedly true that the original claim as filed was clumsily expressed, but the meaning would have been apparent.
- 22 The claimant made an analogous objection for the same reasons to claim 10, which I reject for the same reasons.

Added matter in amendments

- 23 The claimant also objected to the feature H1 added by the proposed amendments as adding matter. It observes that the defendant relied on claim 5 to justify this feature, but claim 5 (a method claim dependent on claim 1, and the basis for feature C1 does not mention the communication channel). The only claim in the patent as granted to mention this is claim 13 (dependent on granted claim 10), and that claim is further restricted by the additional feature

“the control (17) is adapted to automatically adjust the laying speed and/or at least one other operating parameter of the road finishing machine (7)”

- 24 As this is not present in amended claims 10, the claimant argues this is an intermediate generalisation<sup>3</sup> and hence added matter. The claimant further points out that in the application as filed, the only times feedback on a condition of the mixing plant is given to the control of the road finishing machine via the communication channel is when either the control adjusts an operating parameter automatically in response (claim 13 and column 11 lines 39-40) or an operator does so manually (column 11 lines 40-42).
- 25 In my opinion, there is nothing in this argument. Although there was not a claim to the manual adjustment, it is clearly disclosed as an alternative, and hence the patent also generalises the more general concept of adjusting the operating parameter either manually or automatically. As those two possibilities are essentially all-encompassing, this is what amended claim 10 covers and so it does not add matter.

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<sup>3</sup> *Palmaz's European Patents* [1999] RPC 47 as cited above.



## **Claim construction**

- 26 Both the claimant and the defendant spent considerable time on what the patent means by “feedback” signal. The claimant points out that the term ‘feedback’ is described only in very broad terms in the patent, specifically in paragraphs 17, 19 & 24 of the translation. They go on to point out that the term ‘feedback’ is absent in paragraphs 27-45 of the specific description of the patent and the only specific references to transmission of information about the mixing plant to the paver can be found in paragraphs 44-47 of the patent in which temperature of the laying material at the mixing plant during loading is detected and forwarded to the system. The mixing plant can also transmit data to the road finishing machine with respect to the temperature and amount of the prepared laying material by means of the communication channel. They went on to point out that the teaching of paragraph 44 would suggest that the term feedback should be interpreted very broadly as it would appear to encompass writing the temperature of the mixed material on a delivery note.
- 27 The defendants pointed to paragraph 17 as the closest thing to a definition of what the feedback signal might be, pointing to the wording of that passage as indicating the feedback relates to either a smooth operation or an interruption to the operation of the mixing plant, not that it is operating in accordance with normal instructions
- 28 I note firstly that the first line of paragraph 17 says that the feedback signal is sent in certain situations or at regular intervals. This would seem to undermine the defendant’s argument that the feedback indicates only smooth operation or an interruption to the operation of the mixing plant, and this interpretation would seem to be endorsed by the optimisation aspect which points to it being used in accordance with normal instructions. Furthermore, continuous or regular feedback and adjustment of the operating parameters in accordance with the claims would usually be carried out in a process which is operating in accordance with normal instructions and not simply in the binary manner suggested by the defendant’s argument. The references to feedback in the application are broad and there is no indication that they should be read narrowly on the lines the defendant proposes. The argument that the temperature of the mixing plant cannot fall within this broad definition of feedback, when, as the claimant rightly points out, it is the only ‘feedback’ specifically outlined in the description cannot be right and would bring into question whether there is enabling support for a monopoly hinging on this feature in the specification as originally filed. I therefore adopt a broad construction of the word “feedback” to mean information about some feature of the mixing plant’s operation.

## **Novelty/Inventive Step**

- 29 The claimant based novelty objections to the independent claims on two documents, referred to at the hearing and herein as E1 and E4, and obviousness objections based on a further document E3. Other documents put forward by the claimant were not relied on by the claimant at the hearing. The documents relied on were:

E1: US2009/0142133 A1 – published 4 June 2009

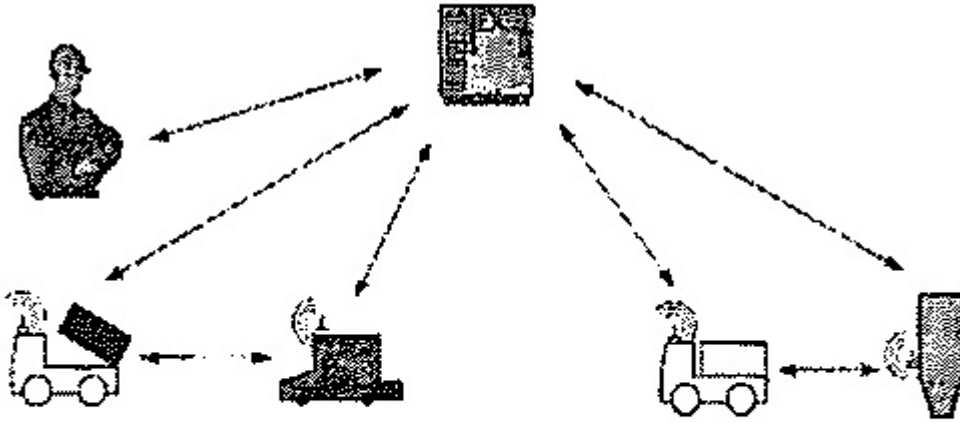
E4: Kilpeläinen P, Heikkilä R, Parkkila T (2007), Automation and wireless communication technologies in road rehabilitation, Proceedings of 24<sup>th</sup> International Symposium on Automation & Robotics in Construction (ISARC 2007), Kochi, 19-21 Sep 2007 pp.35-40 – 21 September 2007

E3: US2008/0249729 A1 – published 9 October 2008

- 30 Discussion at the hearing covered by the unconditionally amended version of the claims and the conditionally amended ones. I turn first to the claims as offered to be unconditionally amended.
- 31 There was no dispute between the parties that feature (A) and (D) were disclosed by all three documents – all three being directed towards a method and associated system of applying a road surface – or that all three documents predate the priority date of the invention.

E4: Kilpeläinen P, Heikkilä R, Parkkila T

- 32 “Automation and wireless communication technologies in road rehabilitation” by Kilpeläinen P, Heikkilä R, Parkkila T is a paper which looks into the use of automation and wireless communication in the control of road repairing and road surfacing processes. By using mobile technology, the survey looked at how information on the process was provided between supervisors, truck drivers, mixing plant operators and paving operators and presented in a visual form so that overall performance of the process can be monitored.
- 33 The claimant asserted claim 1 as offered to be unconditionally amended was invalid in the light of this document for lack of novelty.
- 34 The defendant accepted that features (B) and (C) were disclosed in this document. In paragraphs 2.3.1-2.3.5, the document clearly discloses a system in which various pieces of data about the operation of the whole system is collected and stored, and in which the paver operations can be slowed according to the expected arrival of trucks with asphalt loads, the mixing plant can be shut down if it appears trucks are not soon going to be available to receive the asphalt, and the output of the plant can be adjusted according to the current rate of paving. (In particular, in paragraph 2.3.5 the document states “During the paving the operator of the paver calculates the needed amount of asphalt mass and sends this information to the asphalt plant”).
- 35 The dispute between the parties concerned whether feature C1 (“a feedback on the condition of the mixing plant (3) is given to the road finishing machine”) was disclosed.



**Figure 2 Short and Long Range Communication Technologies in Pavement Process Control**

- 36 In the disclosed system (see diagram above), there is short range communication between the various vehicles, and long range communication to a central server. It is explicit (paragraph 2.4) that the trucks download information about their loaded and amount of mass from the mixing plant and then upload this information to the paver when they arrive – hence this information clearly passes from the plant to the paver. The document notes that the paver operator keeps track of the transported amount of mass.
- 37 The claimant argued that this information is “*feedback on the condition of the mixing plant*” because if no trucks are leaving the mixing plant with an asphalt load, this tells the paver operator that the mixing plant is not producing asphalt destined for the operator’s paver. Even accepting that, however, it does not appear to be disclosed that this information is directly communicated via the long-range communication, and so information only arrives when a truck arrives. So the paver will not actually receive the information that the trucks are not leaving. (There is thus a form of “feedback” that the mixing plant was previously (when the truck left) dispensing asphalt for the paver, but that seems to me to reduce the meaning of “feedback” to a triviality).
- 38 The claimant argued that, to the contrary, this information must be delivered by long range communication with the mixing plant (and certainly the figure seems to show long range communication with the server by all the machines), but there is no disclosure of this – the information is disclosed as being transferred by the trucks.
- 39 The claimant also pointed to paragraph 2.3.5, where it states “Asphalt production on the asphalt plant is highly automated and information about each batch of mass is stored to the system of the plant.” However, the defendant correctly pointed out that this information, in the context of that section as a whole, is about tracking down quality defects or reporting on work done, and there is no indication that this information is sent to the paver.

- 40 The claimant argued on this point that paragraph 2.1 of the document disclosed “users” having access to this data, and paragraph 2.2 referred to the paver operators as being some of these users. From that, Mr Murnane argued that the paver operators had access to the data stored about the mixing plant, and hence the “feedback” feature was satisfied. However, Mr St Quintin pointed to the paragraph referring to paver operators having access to the information about their own paver, rather than generally to all the information, and that the paragraph generally talks about workers having access to information relevant to their work task. I agree that there is no disclosure of paver operators having access to the information about the mixing plant in this manner.
- 41 I therefore find claim 1 as offered unconditionally to be amended to be novel over E4.

E1: US2009/0142133 A1

- 42 US2009/0142133 A1 describes a system for evaluating the temperature of paving material while paving an area and comparing the actual temperature data with predicted data for control and logging of the process. Particular emphasis is placed on the provision of a positional temperature model to help predict the temperature of the laying material as it is transported from supply machines through to paving and compacting machines.

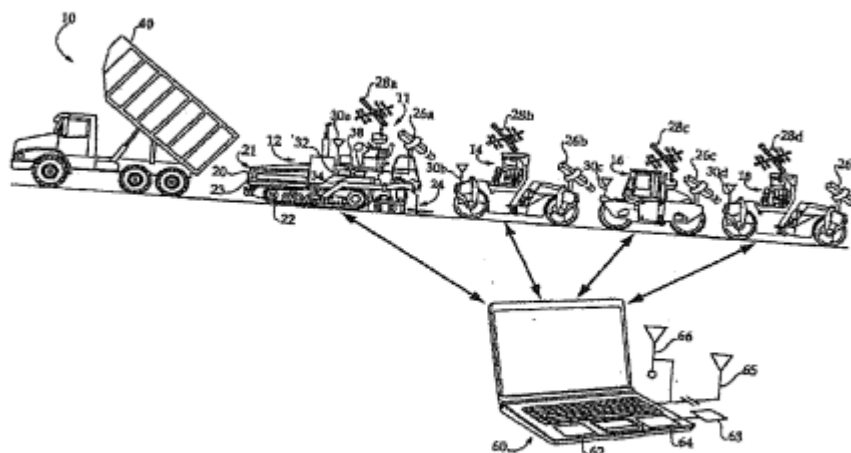


Figure 1

- 43 The system in the document indicates (in paragraph 26) that “control, monitoring, and data recording” may be done at one of the machines 12,14,16,18,40 in the above diagram, or at a remote control station 60. In paragraph 27, control station 60 is said to be able to send commands to the mixing plant to speed it up or slow it down. The claimant put these two points together to argue that this discloses feature (B).
- 44 The defendant contested this, arguing that although the document does disclose some form of control and monitoring on the machine 12 (the paver), it does not

disclose the specific control associated with control station 60 in paragraph 27 of controlling the mixing station, and thus feature (B) is not disclosed.

- 45 I agree with the defendant on this point: control station 60 is very clearly described as an alternative to operations on the machines (including the paver), and the specific control of the mixing plant is disclosed as only being from control station 60. Thus, feature (B) is not disclosed.
- 46 The claimant also argued that feature (C1), “a feedback on the condition of the mixing plant is given to the road finishing machine” is disclosed in the form of the temperature information that is used as input data to a positional temperature model used by the paver. The claimant argued that this information must be sent from the asphalt plant in some way. The claimant also emphasized that the control station 60 communicates “with” supply machines and an asphalt plant, which the claimant argued implied two-way communication.
- 47 However, the defendant argued, and I agree, that the claimant misread the document. Although it does disclose (paragraph 29-31) a positional temperature model being compared with sensor readings at the paver, and it discloses temperature at the time of leaving the asphalt plant as an input to that model (paragraph 32, along with several other factors, such as delivery time), it also states (paragraph 33) that some of these inputs can be input initially. There does not appear to be explicit disclosure of actually measuring the temperature of the asphalt as it leaves the mixing plant and transmitting this to the paver. A similar objection lies to the other “feedback” mentioned at the hearing by Mr Murnane – the composition of the paving material. There is no indication this is anything other than an assumption fed into the model.
- 48 I also observe that paragraph 27 explicitly contemplates some communication between the different machines as being one-way.
- 49 Thus, features (B) and (C1) are not disclosed by E1 and as a result, the document does not anticipate claim 1.
- 50 The claimant argued in the alternative that in any event placing the control on the paver and providing an acknowledgement of the command to speed up or slow down the mixing plant was obvious.
- 51 However, I think this requires too many steps on the part of the skilled man. An acknowledgement of a command to change the speed of the mixing plant would seem a small step, but the question is still begged as to why the skilled person would place the control of the mixer (and its subsequent acknowledgement) on the paver. The claimant offered little in the way of evidence from this beyond assertion, seemingly as a matter of general impression which I do not consider to be enough to establish this as the fourth step of the *Pozzoli* test cited above.
- 52 I therefore find claim 1 novel and inventive over document E1.
- 53 The claimant made equivalent arguments regarding claim 10, which I reject for the same reasons as I reject the arguments regarding to claim 1 above.

54 E3: US2008/0249729 A1

55 US2008/0249729 A1 (Martinez) outlines a system for providing real time quality control monitoring of pavement hot mix material during the manufacturing and deploying of asphalt compositions. The quality control data can be drawn from a mixing plant, lay down equipment and a paver and allows the system to keep track of the progress of each user.

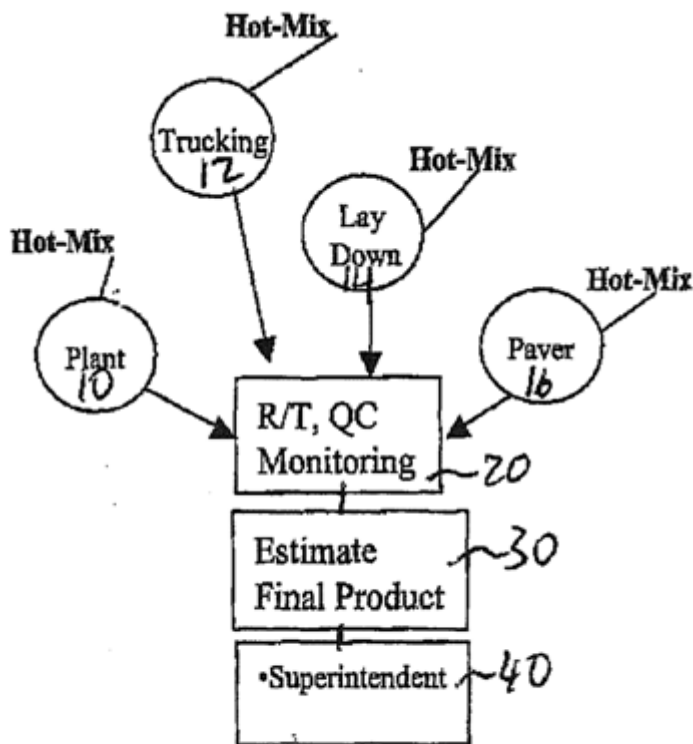


FIG. 1

56 As can be seen from the above diagram, the document discloses the provision of sensors at the mixing plant (10) to monitor the condition of the mixing plant. Information from these sensors is given to a realtime quality monitoring server 20. According to paragraph 35, "the real-time quality control monitoring system 20 is connected to wide area network such as the Internet, as well as to a local area network." The paver is connected to the same network to also send data to the server. The system information is then provided to client workstations. Operators can, according to paragraph 27, adjust the hot-mix at the plant. The document therefore discloses features B,C, and C1, with the exception of the operator issuing commands to the mixing plant and receiving feedback from (the sensors 10 on) the mixing plant being located on the paver.

57 The claimant argues that it would be obvious, given that the paver is already connected by WAN or LAN to the quality control monitoring server 20, it would be an obvious choice to locate a client workstation at the server. As with the obviousness argument for E1, the claimant has not provided any real evidence as to why this would be obvious to the skilled person (Mr Murnane argued that the paver is where a supervisor would wish to be as this is where the work is happening, but this seems

purely speculative), and I do not consider this established. I therefore find unconditionally amended claim 1 to be inventive over E3.

- 58 The claimant made an equivalent argument as to the obviousness of claim 10 in view of E3, which I reject for the same reasons as I reject the attack on claim 1 above.

#### Conclusion on novelty and inventive step

- 59 I have found all the novelty and inventive step attacks on the independent claims of the patent as proposed to be unconditionally amended fail. The novelty and inventive step attacks on the dependent claims therefore necessarily fail also.
- 60 There is thus no need to consider the conditional amendments, which were only offered if I were to find the patent as proposed to be unconditionally amended invalid.

#### **The overriding objective**

- 61 As can be seen from the brief history of the case in the introduction, the defendant very promptly offered its unconditional and conditional amendments. When initially filing its statement of case, the claimant also filed a number of documents (including the three considered here) as evidence and specified in its statement of case very clearly how it considered these documents to show a lack of novelty and inventive step. In response, along with its counterstatement the defendant submitted its unconditional and conditional offers to amend.
- 62 The claimant filed the necessary form to continue proceedings, but chose to submit no further evidence (and in response, neither did the defendant). Nor did the claimant amend its statement of case. However, in its skeleton argument, submitted only a couple of weeks before the hearing, the claimant raised the objections considered in this decision. Of those objections, the only one mentioned in the statement of claim is the added matter objection against the claims as granted.
- 63 The defendant objected strenuously to the claimant even being allowed to put these arguments at the hearing. It argued both that the claimant should have formally opposed the amendments and not doing so was a procedural failing that should not be tolerated, and that to allow the claimant to spring these arguments on the defendant – who had to operate through layers of UK and German attorneys – at such a late stage when the amendments had been known for months was unfair on the defendant and to allow it would violate the overriding objective.
- 64 The claimant, however, pointed out that as the amendments had been made part of these proceedings there was no separate advertisement of them, and considered that as the claimant was relying on no new evidence, it was not unfair to the defendant. The claimant also pointed out that the defendant needed to obtain the comptroller's agreement to amendment, so the burden of proof was not all one way.
- 65 At the hearing, I indicated that I would decide this point, but as all parties were present I wanted to hear full argument. In the event, I consider that the claimant has not made out its case, so any prejudice to the defendants is arguably moot.

66 However, I do not consider the claimant's approach to have been acceptable. It is true that they have not violated any precise deadlines, such as there are in opposed amendment proceedings. However, they should have amended their statement of case as soon as practicable – and they had months – to give the defendant fair notice of their new objections following the amendments. Although there was no new evidence in terms of documents, the defendant's amendments were clearly tailored to overcome the claimant's original arguments, and the claimant had to draw out new features of the documents which, on any view, were not immediately relevant even though I find the claimant's arguments mainly reasonable (though not convincing).

### **Conclusion**

67 I have found that the claimant's attacks on the patent as proposed to be unconditionally amended fail and order that the patent be so amended.

### **Costs**

68 The defendant has won and is in principle entitled to a contribution towards its costs. I will take submissions from the parties on this.

### **Appeal**

69 Any appeal must be lodged within 28 days after the date of this decision.

**JULYAN ELBRO**  
**Divisional Director acting for the Comptroller**