

Internal distribution code:

- (A) [-] Publication in OJ
- (B) [-] To Chairmen and Members
- (C) [-] To Chairmen
- (D) [X] No distribution

**Datasheet for the decision
of 9 September 2021**

Case Number: T 0319/19 - 3.2.01

Application Number: 12808691.5

Publication Number: 2770860

IPC: A24F47/00, A61M15/06

Language of the proceedings: EN

Title of invention:

AN ELECTRICALLY OPERATED AEROSOL GENERATING SYSTEM HAVING
AEROSOL PRODUCTION CONTROL

Patent Proprietor:

Philip Morris Products S.A.

Opponent:

JT International S.A.

Headword:

Relevant legal provisions:

EPC Art. 100(b), 56
RPBA 2020 Art. 13(1)
RPBA Art. 12(4)
EPC R. 124(1)

Keyword:

Grounds for opposition - insufficiency of disclosure (no)

Inventive step - main request (yes)

Minutes of oral proceedings - request to record statement in the minutes (refused)

Amendment to appeal case - evidence not admitted

Late-filed evidence - submitted with the statement of grounds of appeal - Admitted (yes)

Decisions cited:

T 0113/12

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 0319/19 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 9 September 2021

Appellant: JT International S.A.
(Opponent) 8 rue Kazem Radjavi
1202 Geneva (CH)

Representative: Gill Jennings & Every LLP
The Broadgate Tower
20 Primrose Street
London EC2A 2ES (GB)

Respondent: Philip Morris Products S.A.
(Patent Proprietor) Quai Jeanrenaud 3
2000 Neuchâtel (CH)

Representative: Ponder, William Anthony John
Reddie & Grose LLP
The White Chapel Building
10 Whitechapel High Street
London E1 8QS (GB)

Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
20 November 2018 concerning maintenance of the
European Patent No. 2770860 in amended form.**

Composition of the Board:

Chairman G. Pricolo
Members: S. Mangin
O. Loizou

Summary of Facts and Submissions

- I. The appeal was filed by the appellant (opponent) against the interlocutory decision of the opposition division finding that the patent in suit (hereinafter "the patent") in an amended form according to the main request before the opposition division met the requirements of the EPC.
- II. The Opposition Division held that
- the main request fulfilled the requirements of Article 123(2) and 84 EPC,
 - the patent disclosed the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art, and
 - the subject-matter of independent claims 1, 7 and 9 of the main request filed during oral proceedings was novel over D1 (WO 2011/033396) and involved an inventive step in view of D1, D12 (EP 1 092 446) and D9 (GB 2 343 122) in combination with common general knowledge.
- III. Oral proceedings were held before the Board on 9 September 2021.
- IV. The appellant (opponent) requested that the decision under appeal be set aside and the patent be revoked.

The respondent (proprietor) requested that the appeal be dismissed (main request), or in the alternative that the patent be maintained in amended form on the basis of one of the auxiliary requests 1-3 filed with the reply to the statement of grounds of appeal.

V. The independent claims 1 and 7 of the main request read as follows:

(a) Claim 1

A method of controlling aerosol production in an aerosol-generating device (100), the device comprising:
an aerosol generating element (119) which is an electrical heater comprising at least one heater element;
a flow channel configured to allow an air flow past the aerosol generating element; and
a flow sensor (111) configured to detect the air flow in the flow channel, comprising the steps of:
determining a value of a first parameter related to a change in flow rate of the air flow; and
reducing or suspending the supply of power to the aerosol generating element depending on a result of a comparison between the value of the first parameter and a threshold value,

characterised in that

the first parameter is derived from a combination of a second parameter that is a measure of a flow rate detected by the flow sensor and a third parameter related to the flow rate,
and wherein the third parameter is temperature, power supplied to the aerosol generating element, a maximum detected flow rate, or a rate of change of flow rate, or is derived from a combination of two or more of temperature, power supplied to the aerosol generating element, a maximum detected flow rate, and a rate of change of flow rate.

(b) Claim 7

An electrically operated aerosol generating device, the device comprising: at least one electric

aerosol generating element (119), which is an electrical heater comprising at least one heater element, for forming an aerosol from a substrate; a power supply (107) for supplying power to the at least one aerosol generating element; and electric circuitry (109) for controlling supply of power from the power supply to the at least one aerosol generating element, the electric circuitry including a sensor (111) for detecting air flow past the aerosol generating element and wherein the electric circuitry is arranged to:

determine a value of a first parameter related to a change in flow rate of the air flow; and reduce or suspend the supply of power to the aerosol generating element to zero dependent on a result of a comparison between the value of the first parameter and a threshold value,

characterised in that

the first parameter is derived from a combination of a second parameter that is a measure of a flow rate detected by the flow sensor and a third parameter related to the flow rate, and wherein the third parameter is temperature, power supplied to the aerosol generating element, a maximum detected flow rate, or a rate of change of flow rate, or is derived from a combination of two or more of temperature, power supplied to the aerosol generating element, a maximum detected flow rate, and a rate of change of flow rate.

VI. In the present decision, reference is additionally made to the following documents:

D13 : CA 2884987

D14 : WO 00/50111

D15 : WO 2011/050943

D16 : an extract from e-cigarette-forum.com dated
14. 03.2011 ([http://www.e-cigarette-forum.com/
threads/question-about-the-gogo.187059/
#post-3190286](http://www.e-cigarette-forum.com/threads/question-about-the-gogo.187059/#post-3190286))
D17 : EP 2 460 423 A1

Reasons for the Decision

1. Insufficiency of disclosure - Article 100(b) EPC
 - 1.1 The Board confirms the opinion of the Opposition Division, which held that the patent disclosed the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art (reference is made to page 5, points 3-7 of the appealed decision).
 - 1.2 According to claim 1, the supply of power to the aerosol generating element can be reduced or suspended depending on the result of a comparison between the value of the first parameter and a threshold value. The first parameter may be derived from a combination of a second parameter that is a measure of a flow rate and a third parameter which is a maximum detected flow rate.
 - 1.3 The appellant alleged that as the patent specification did not explain how to predict an inhalation pattern in advance, it was only possible to determine the maximum detected flow rate in a puff after the entire puff had been completed. However the skilled person could not wait until the end of the puff and then go back in time and stop the supply of power to the aerosol generating device at the time corresponding to the maximum flow rate.

The appellant further referred to figure 3 of the patent which showed a possible inhalation pattern with two peaks corresponding to maxima detected flow rate and stated that it was not possible to determine which of the two peaks would be higher until the end of the puff.

1.4 The Board does not agree. The maximum detected flow rate at any given time may be determined by calculating the rate of change of the flow rate as shown in figures 4 and 5 of the patent (curves 410 and 510 respectively). Furthermore claim 1 does not exclude the possibility of multiple maxima of detected flow rate during the course of a puff as represented on figure 5. As pointed out by the Opposition Division (point 6 of the decision under appeal), there is no requirement in claim 1 that an absolute maximum has to be detected (which would require the end of the puff to be reached). The skilled person is thereby able to carry out the invention as claimed.

2. Admissibility of document D17 - Article 13(1) RPBA 2020

The Board does not admit into the appeal proceedings document D17 filed by the appellant with letter of 4 May 2020 after the filing of the statement of grounds of appeal which was filed on 28 March 2019.

2.1 The Appellant submitted that D17 should be admitted into the appeal proceedings for the following reasons:

- D17 was prima facie relevant against the novelty of claim 1.
- D17 was filed on 4 May 2020 more than a year before the oral proceedings and was an application belonging to the respondent who would therefore be familiar therewith.

- The admittance of D17 would simplify the proceedings as the Board could move directly to auxiliary request 2, for which document D17 would not be relevant anymore. The appellant would then focus on inventive step based on document D12, relying for insufficiency of disclosure and the other inventive step attacks to their written submissions.
- Maintaining an invalid patent was not in the public interest and would require legal actions in front of the various national courts.
- The appellant was taken by surprise by the filing of the main request in oral proceedings in opposition, and this contributed to the late filing of D17.

2.2 The Respondent submitted that D17 should not be admitted into the appeal proceedings for the following reasons:

- D17 was filed at a very late stage in the proceedings, well after the filing of the statement of grounds of appeal.
- The objection of lack of novelty of claim 1 in view of D17 led to a fresh case and could not be considered as an appropriate reaction to the developments in the previous proceedings.
- D17 was publicly available since the beginning of the opposition proceedings and was easily retrievable in patent databases as it had the same IC class and was from the same applicant as the patent. Consequently there was no reason for not finding D17 at an earlier stage.
- Prima facie relevance was not the decisive criterion for the admittance of D17 and even if it were, D17 (column 15, lines 3-8) did not disclose comparing the first parameter derived from a combination of the second and third parameter and a threshold value, but

disclosed comparing the airflow rate with a threshold value.

- The introduction of D17 in the proceedings would be contrary to procedural efficiency as the respondent would consider submitting a new request which may lead to a remittal of the case to the Opposition Division.
- Time limits for making submission in opposition and in appeal would be void of sense if new documents could be submitted at any time of the opposition and appeal proceedings.

2.3 Under Article 13(1), 1st sentence, RPBA 2020 any amendment to a party's appeal case after it has filed its grounds of appeal or reply is subject to a party's justification for its amendment and may be admitted only at the discretion of the Board. According to Article 13(1), fourth sentence, the Board shall exercise its discretion in view of, *inter alia*, the current state of the proceedings, the suitability of the amendment to resolve the issues which were admissibly raised by another party in the appeal proceedings, or which were raised by the Board and whether the amendment is detrimental to procedural economy.

The Board does not admit document D17 into the appeal proceedings for the following reasons:

- D17 cannot be seen as a timely reaction to the decision as it was filed more than one year after filing the statement of grounds of appeal; nor can it be regarded as a reaction to any surprising issues in these appeal proceedings,
- Whether D17 is *prima facie* relevant, as alleged by the appellant, is not the sole criterion the Board should consider when exercising its discretion in the sense of Article 13(1) RPBA 2020.

- What is decisive is that with the filing of this document the appellant is seeking to make, without objective justification, a fresh case at a late stage in the appeal proceedings.

2.4 Admissibility of D13, D14, D15 and D16 - Article 12(4) RPBA 2007

The Board exercises its discretion under Rule 12(4) RPBA 2007 to admit into the appeal proceedings documents D13-D16.

2.4.1 The respondent submitted that documents D13-D16 filed with the statement of grounds of appeal were late filed and should not be admitted into the appeal proceedings as the documents were not prima facie relevant, i.e. the documents would not change the outcome of the decision, and as they could not be regarded as a legitimate reaction to the decision of the opposition division.

2.4.2 As the statement of grounds of appeal was filed before 1 January 2020, Article 12(4) RPBA 2007 applies (pursuant to Article 25(2) RPBA 2020) when assessing whether the Board should exercise its discretion not to admit documents D13-D16.

According to established case law, documents filed with the statement of grounds of appeal should not be held inadmissible if they are an appropriate and immediate reaction to developments in the previous proceedings, for example where they give the losing party in the opposition proceedings an opportunity to fill in the gaps in its arguments by presenting further evidence on appeal (see cases reported in Case Law of the Boards of

Appeal of the European Patent Office, 9th edition, 2019, V.A.4.13.1).

In the case at hand, the filing of documents D13-D16 is a normal and legitimate reaction to the admission of the main request filed during oral proceedings in opposition. Indeed the main request admitted by the opposition division comprises new features taken from the description which were not foreseeable by the appellant (opponent). The appellant could not have been reasonably expected to have presented D13-D16 during oral proceedings before the Opposition Division. It is therefore legitimate for the appellant to file documents D13-D16 at the earliest possible occasion that is with the statement of grounds of appeal. It would be inequitable not to allow the appellant to respond to such an unforeseeable new situation with new documents. Such a course of action would effectively tie the hands of the appellant in appeal to only base their arguments on previously cited documents, having first given the respondent a free hand to amend the claim based on the description at the last moment in opposition proceedings (see T 0113/12).

The Opposition Division held that the subject-matter of claim 1 involved an inventive step starting from D1, D9 and D12 in combination with common general knowledge. The appellant submitted documents D13-D16 to provide evidence of common general knowledge at the priority date of the patent and/or to combine D13-D16 with the documents D1 or D12, which were considered as possible closest prior art. Documents D13-D16 thus do not even fundamentally change the appellant's inventive step objections presented in opposition.

3. Inventive step - Article 56 EPC

The Board confirms the view of the Opposition Division that the subject-matter of claims 1 and 7 involves an inventive step (reference is made to pages 7-11, points 15-30 of the appealed decision).

The appellant held that the subject-matter of claims 1 and 7 did not involve an inventive step starting from the teaching of D1, D12 or D9.

3.1 Starting from D1

3.1.1 The appellant referred to the introduction of the patent (paragraphs [0005]-[0008]) according to which condensation was a problem in aerosol generating devices in general and emphasised that the problem of condensation was irrespective of whether the aerosol-generating device was an electric heated aerosol or a nebuliser. The skilled person would therefore consider D1, relating to a typical electronic cigarette, and which comprised all the essential hardware features of claim 1 of the patent, i.e. a heater, a controller and a flow sensor, as the closest prior art.

The appellant considered that the subject-matter of claim 1 differed from D1 in that D1 did not explicitly disclose to turn off the heater at a specific point in time in the user's inhalation cycle and regarded the problem to be solved as to reduce the amount of condensation left in the device.

(a) According to the appellant, the skilled person would consider D12, relating to an aerosol generating device. D12 taught that nebulisation

could be terminated before the end of a user's inhalation which would reduce the amount of vapour left in the device. The skilled person would therefore be motivated to apply the technique described in D12 for terminating vaporisation within the device of D1 in order to alleviate condensation. This could be achieved trivially by implementing the technique described in paragraph [0025] of D12; for example by terminating atomization when breathing rate has decreased to 80% of the maximum breathing rate.

The appellant emphasised that the electronic cigarette in D1 was structurally compatible with the nebuliser of D12 as the latter already comprised an airflow sensor configured to detect inhalations and a controller.

The appellant added that the online forum discussion disclosed in D16 provided additional evidence that the problem of condensation was known to users of electronic cigarettes and a manual way of fixing the problem in button-activated devices was well known at the priority date of the opposed patent, namely stopping pressing the heater activation button a short time before finishing inhaling.

- (b) According to the appellant the skilled person would also combine D1 with common general knowledge or with D13 to arrive at the subject-matter of claim 1.

Starting from D1, the appellant identified the same difference as above, the step of "reducing or suspending the supply of power to the aerosol

generating element depending on a result of a comparison between the value of the first parameter and a threshold" and defined the problem to be solved as how to suspend supply of power to the heater.

The appellant argued that a natural solution would be to use the same approach that was used for turning the heater on, namely comparing the capacitance value to a threshold to determine if the suction action had sufficient airflow rate. If the air flow rate was insufficient, as determined by comparing the capacitance value to a threshold, then it was clear that the supply of power to the heater should be reduced or suspended.

Moreover D13 (page 6, lines 9 and 26-30) disclosed an electronic cigarette having an electrical heater and an inhalation sensor, whereby the function of the sensor was to switch on or off the whole circuit according to the gas flow rate. It would be obvious for the skilled person to use the solution offered by D13, namely, to switch off the supply of power according to gas flow rate when the inhalation sensor detected that the gas flow rate dropped below a threshold value.

3.1.2 The Board judges that the skilled person would not combine the teaching of D1 with the teaching of D12, common general knowledge or the teaching of D13 to arrive at the subject-matter of claim 1.

(a) The two devices in documents D1 and D12, while falling under the generic term of an aerosol-generating device, are of different types and have different structures and different purposes. D1

deals with an electronic cigarette comprising a heating element 300 for evaporating nicotine, while D12 deals with a nebuliser, comprising an ultrasonic transducer atomising liquid-based medication.

Furthermore D12 does not deal with the problem of reducing the amount of condensation. In D12 (paragraph [0024]), terminating nebulisation before the end of inhalation is implemented to reduce the amount of medication being re-breathed into the atmosphere. The skilled person would therefore not be motivated to implement the technique described in paragraph [0025] of D12 in the device of D1 to reduce the amount of condensation.

D16 teaches that the problem of condensation when using a so-called "GoGo" device (a kind of E-cigarette) is known to users and that a solution is "to let up on the button before you stop inhaling". However D16 does not give any indication on the structure of the "GoGo" device and whether the device is structurally and functionally like the one of D1. In view of D16, it is unclear what measures the skilled person would take to reduce the amount of condensation in the device of D1.

- (b) As for the objections based on D1 in combination with common general knowledge or D13, the Board considers that the subject-matter of claim 1 differs from D1 at least in that the supply of power to the aerosol generating element is reduced or suspended depending on the result of a comparison between the value of the first parameter and a threshold value. However the Board does not

agree with the technical problem as defined by the appellant.

The above identified difference has the effect of reducing the amount of condensation as acknowledged by the appellant when arguing in respect of the previous inventive step objection (D1 in combination with D12). The objective technical problem is therefore to reduce the amount of condensation.

D1 neither identifies the problem of condensation nor suggests any solution to reduce condensation. Starting from D1 the skilled person has therefore no incentive to reduce or suspend the supply of power to the aerosol generating element depending on a result of a comparison between the value of the first parameter and a threshold. The skilled person, having regard to common general knowledge, would therefore not arrive at the subject-matter of claim 1 without hindsight.

D13 relates to an atomizing electronic cigarette providing smaller and more uniform atomized or vaporized droplets and does not deal with the issue of condensation. There is therefore no reason why a skilled person would consider D13. Furthermore D13 discloses on page 6, lines 26-30 that: *"The function of the sensor is to switch on or off the whole circuit according to the gas flow"*. In D13, the reduction or suspension is simply based on the air flow rate. Therefore, even if the skilled person would combine the teaching of D1 with the teaching of D13, the skilled person would not arrive at the subject-matter of claim 1.

3.2 Starting from D12

The invention in D12 relates to a nebuliser suitable for nebulising/atomizing liquid-based medication for the purpose of inhalation by a patient (See D12, paragraph [0001]).

The subject-matter of claim 1 differs from D12 in that the electrically operated aerosol generating device comprises an electrical heater comprising at least one heater element. This is not disputed by the parties.

- 3.2.1 Referring to paragraphs [0017] and [0086] of the patent, the appellant argued that at the priority date, the skilled person was aware of different techniques for producing an aerosol or mist of particles: using an electrical heater or a mechanical device such as a vibrating orifice transducer or a piezoelectric device. The appellant concluded that the general principles described within the patent could be applied equally to different types of aerosol generator, even if claim 1 was limited to an electrical heater.

Hence it would be obvious for the skilled person to replace the ultrasonic nebuliser in D12 with an electrical heater since these are well known alternatives. The appellant emphasised that no significant alterations would be required to the arrangement in D12 and that any alterations that would be required would be well within the skill set of a person skilled in the art and could be implemented without exercising inventive skill.

Furthermore D14 disclosed an inhaler with a piezoelectric dispenser-head, in which heating means could be provided to reduce droplet size (page 9, lines

12-21). The skilled person would therefore implement this arrangement, i.e. add heating means in addition to the ultrasonic nebuliser without making any other modifications to the system described in D12.

Finally D15 (page 10, lines 18-21) disclosed that an electrically heated smoking system may comprise an atomiser including at least one heater, and that the atomiser could also include electromechanical elements such as piezoelectric elements. The appellant argued that ultrasonic nebulisers and heating elements being described as alternatives, it is obvious for the skilled person to include a heater with the nebuliser or to replace the nebuliser disclosed in D12.

- 3.2.2 The Board does not agree. D12 (figure 2) relates to a nebuliser comprising an ultrasonic transducer 16 located in a reservoir 12 retaining a liquid-based medication 14 providing excitation energy at the required frequency to nebulise the liquid based medication 14. A thermistor is used to detect patient inhalation and to trigger excitation of the transducer 16.

The Board judges that D12 is not the closest prior art and is not a suitable starting point considering the structure of the device of D12 and the way it functions. In claim 1, the aerosol generating element is an electrical heater. While this is the only difference between the subject-matter of claim 1 and D12, the electrical heater requires a very distinct device, having a totally different structure, and which functions in a totally different way as compared to the nebuliser of D12. For example the heater element cannot be placed inside the reservoir and the thermistor used as a sensor in D12, whose resistance is strongly

dependent on temperature, is not compatible with an electrical heater unless its location and sensitivity are adapted. The skilled person would therefore not consider D12 as a suitable starting point.

Nevertheless, should D12 be chosen as a starting point, the problem to be solved may be considered as providing an alternative aerosol generating device.

Starting from D12 the skilled person would not be motivated to replace the ultrasonic transducer by a heating element which would require extensive modifications of the nebuliser. Indeed these modifications cannot be considered as straight forward and within the common general knowledge of the skilled person as alleged by the appellant. If the transducer were replaced by a heating element, the control circuit for optimising the oscillation frequency of the transducer would also need to be replaced, but this is the heart of the invention in D12 (See paragraphs [0009]-[0011]). Furthermore the heating element would need to be placed outside the reservoir and a wick would need to be added to transport the liquid to be vaporised to the heating element. The location and the sensitivity of the thermistor would also need to be adapted to the heated airflow.

Starting from D12, the skilled person would also not add a heater to the ultrasonic transducer, since the problem to be solved in D12 is to provide a simple ultrasonic nebuliser capable of controlling the size of atomised particles and inexpensive to manufacture (D12, paragraphs [0007] and [0008]). Indeed adding a heater would not simplify the nebuliser of D12 and would increase its manufacturing costs. Furthermore it would

have an impact on the droplets size which would require further modification of the nebuliser of D12.

But even if the skilled person includes a heating element in addition to the ultrasonic transducer, the skilled person will still not arrive at the subject-matter of claim 1 because the heating element would not be the aerosol generating element as defined in claim 1. The heating element would merely heat an aerosol which has already been heated by the ultrasonic transducer.

3.3 Starting from D9

3.3.1 The appellant argued that the subject-matter of claim 1 differed from the nebuliser of D9 in that the aerosol generating element is an electrical heater comprising at least one heater element. In their view it would be obvious for the skilled person to replace the nebuliser described in D9 with an electrical heater having at least one heater element.

3.3.2 The Board does not agree. D9 (figures 2 and 3) discloses a nebuliser, whereby atomisation of the liquid medication 15 is caused by a stream of gas under pressure. A compressor operating with an accumulator provides the gas under pressure. The nebuliser of D9 is structurally and functionally very different from the aerosol generating device of claim 1.

Similarly to the nebuliser of D12, the Board considers that the nebuliser of D9 is not a suitable starting point and that even if the skilled person would start from D9, the skilled person would not be motivated to replace the use of compressed gas to nebulise the liquid medication with the use of a heating element to vaporise the liquid medication. Such a change would

require extensive modifications to the nebuliser which are not obvious for the skilled person.

4. Recording of a statement of the respondent in the minutes

According to Rule 124(1) EPC the minutes of oral proceedings contain only the essentials of the oral proceedings. What is considered "essential" or "relevant" is within the discretion of the minute writer (Case Law of the Boards of Appeal 9th ed. 2019 III.C.7.10.1).

The request of the appellant to record verbatim in the minutes of the oral proceedings a statement made by the respondent concerning the interpretation of claim 1 during the discussion on the admissibility of document D17 is refused.

Furthermore it is established case law that it is not the function of the minutes to record statements which a party considers will be of use to it in any subsequent proceedings in national courts, for example in infringement proceedings as to the extent of protection conferred by the patent in suit. This is because such statements are not "relevant" to the decision which the Board has to take, within the meaning of Rule 124(1) EPC. Such matters are within the exclusive jurisdiction of the national courts (Case Law of the Boards of Appeal 9th ed. 2019 III.C.7.10.2).

In the present case, the interpretation of claim 1 for the purpose of assessing whether D17 should be admitted into the appeal proceedings is not relevant for the decision of the Board and is thus not proper subject-matter for the minutes. As mentioned under 2.3 prima facie relevance of D17 was not the criterion for

assessing admissibility of D17 under Article 13(1) RPBA 2020. Decisive was that with the filing of this document the appellant sought in violation of Article 13(1) RPBA 2020 to make a fresh case at a late stage in the appeal proceedings.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



A. Vottner

G. Pricolo

Decision electronically authenticated