

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

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Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte STEPHEN J. CHASKO

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Appeal No. 2002-0885  
Application 09/149,917<sup>1</sup>

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ON BRIEF

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Before HAIRSTON, JERRY SMITH, and BARRETT, Administrative Patent Judges.

BARRETT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1-16 and 25-30.

We reverse.

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<sup>1</sup> Application for patent filed September 9, 1998, entitled "Methods and Apparatus for Creating and Storing Secure Customer Receipts on Smart Cards."

BACKGROUND

The invention relates to a system and method for providing a secure means of storing transaction data to eliminate the need for paper receipts.

Claim 14 is reproduced below.

14. A system for generating and storing verifiable electronic retail transaction receipts comprising:

a point of sale (POS) system including a plurality of POS terminals, said terminals comprising a microprocessor, a memory, an operator keyboard, an operator display, a cash drawer;

a store controller;

a computer program executed by the POS system for storing data in the memory comprising a retail merchant identification number, a retail customer identification number, and transaction data, said program for encrypting said data with a merchant supplied signature key to generate a merchant signature and generating a verifiable electronic retail transaction receipt comprising said merchant signature and detailed transaction data; and

a customer secure medium and a merchant secure medium for storing said verifiable electronic retail transaction receipts.

The examiner relies on the following references:

Davis et al. (Davis)	5,577,121	November 19, 1996
Tognazzini	5,739,512	April 14, 1998

Claims 14-16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Davis.

Claims 1-13 and 25-30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tognazzini and Davis.

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We refer to the final rejection (Paper No. 7) and the examiner's answer (Paper No. 12) (pages referred to as "EA\_\_") for a statement of the examiner's rejection, and to the brief (Paper No. 11) (pages referred to as "Br\_\_") and reply brief (Paper No. 13) (pages referred to as "RBr\_\_") for a statement of appellant's arguments thereagainst.

OPINION

Claims 14-16

Appellant argues that Davis does not teach the claimed features of: (1) a computer program that encrypts the three pieces of data of a retail merchant identification number, a retail customer identification number, and transaction data with a merchant supplied signature key to generate a merchant signature; (2) then generating a verifiable electronic retail transaction receipt comprising said merchant signature and detailed transaction data; and (3) customer and merchant media storing the verifiable electronic retail transaction receipt on a customer secure medium and a merchant secure medium (Br7).

In the reply brief, appellant focuses on limitation (1), arguing that "[a]mong its failings, Davis does not teach and does not render obvious using a merchant supplied signature key to encrypt a retail merchant identification number AND a retail customer identification number AND transaction data to form a merchant signature, as claimed . . . [in] claim 14" (RBr2).

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As to limitation (1), the examiner finds that the claimed retail merchant identification number, a retail customer number, and transaction data correspond to the mutual validation of the SVC (stored value card) and the POS terminal to establish a secure session, discussed at column 9, lines 22-29 (EA4). The examiner finds that the claimed encrypting of the three pieces of data with a merchant supplied key corresponds to encrypting data with a merchant supplied session key to generate a transaction signature, discussed at column 9, lines 30, 32, and 59 (EA4).

The examiner does not explain, and we do not see how the mutual validation described at column 9, lines 22-29, teaches encrypting the specific three pieces of data of a retail merchant identification number, a retail customer number, and transaction data with a merchant supplied signature key. We have looked through Davis on our own and find the mutual validation procedure for establishing a secure session described in more detail at column 11, line 65, to column 14, line 21, with respect to Figs. 3A and 3B. The SVC and the terminal generate a session key which encrypt the same data and the results are compared and the transaction is enabled only if the results are the same (col. 1, line 62, to col. 2, line 9; col. 13, lines 53-55). We do not see what the examiner considers to correspond to the retail merchant identification number, a retail customer number, and transaction data in the mutual validation procedure. Nor is the session key,

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which is generated by the SVC and the terminal, a merchant supplied signature key. While there is disclosure of an SVC identification number (col. 11, lines 43-44), which could be considered a retail customer identification number, this number is not encrypted in the mutual validation procedure (col. 12, lines 31-36). If there is other relevant disclosure in Davis, the examiner has not pointed it out. Accordingly, the examiner has not shown limitation (1) in Davis.

As to limitation (2), generating a verifiable electronic retail transaction receipt comprising said merchant signature and detailed transaction data, the examiner refers to establishing a secure audit trail including the signature associated with each transaction described at column 9, lines 59-67 (EA4).

The secure audit trail described at column 9 stores a transaction signature. However, the examiner does not explain, and we do not see how the secure audit trail described at column 9, lines 59-67, teaches generating a verifiable electronic retail transaction receipt comprising the merchant signature and detailed transaction data, where the merchant signature is defined in limitation (1). We have looked through Davis on our own and find the audit trail or transaction log described in more detail at column 14, line 56, to column 16, line 2, with respect to Fig. 4. A derived signature key is obtained by encrypting the identification number of the SVC with a key associated with the

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card issuer (not the merchant), the current transaction count is encrypted with the derived signature key to provide a signing key, and the transaction amount is encrypted with the signing key to generate the SVC transaction signature. Thus, the final SVC transaction signature contains an encrypted SVC identification number (which could be considered a retail customer identification number) and a transaction count and a transaction amount (which together are considered transaction data), but we find no teaching of it containing a retail merchant identification number, as claimed. Nor is the SVC transaction signature intended to be stored on the smart card or at the merchant, as claimed. Davis also generates a transaction signature by encrypting the transaction amount, the SVC transaction count, and at least a portion of the SVC transaction signature with a signing key (col. 15, lines 35-39), where the signing key is generated in the security module (col. 15, lines 30-34). The transaction signature might be considered encryption of transaction data with a merchant supplied signature key. However, we do not find any teaching of encrypting all three pieces of data with a merchant supplied signature key to generate a merchant supplied signature, as claimed in limitation (1). Therefore, the transaction signature in Davis is not the merchant signature. In addition, limitation (2) requires that the "detailed transaction data" is separate from the "transaction

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data" which is encrypted into the merchant signature, as shown in appellants' Fig. 6, which is not taught by Davis. Accordingly, the examiner has not shown limitation (2) to be taught by Davis.

As to limitation (3), customer and merchant secure media "for storing said verifiable electronic retail transaction receipts," the examiner interprets the "for storing" limitation as a mere statement of intended use which is not entitled to patentable weight and, consequently, Davis does not need to show storing a detailed transaction receipt (EA4-5; EA10). However, the examiner also refers to the cash balance information being stored on the SVC and the transaction being logged or stored within the POS memory described at column 6, lines 40-43 (EA4).

The "for storing" could be interpreted as a statement of intended use because storing is not positively claimed even if it is implied. Davis teaches media which is capable of storing "verifiable electronic retail transaction receipt" if it existed, which we found it does not. Thus, it is arguable that Davis meets limitation (3) and we do not rely on this limitation in reversing the rejection.

We find that Davis does not teach at least limitations (1) and (2) of claim 14 and, accordingly, the anticipation rejection of claims 14-16 is reversed.

Claims 1-13 and 25

Independent claims 1, 6, and 10 contain limitations corresponding to limitations (1) and (2) discussed in connection with claim 14, which we found were not disclosed in Davis.

The examiner finds that Tognazzini teaches, at column 4, line 67, to column 5, line 8, generating/storing a retail merchant identification number, a retail customer identification number, and transaction data; encrypting transaction data; and generating a transaction record and storing it on a POS system (EA5-6). The examiner finds that "Tognazzini does not teach storing a merchant supplied signature key or encrypting the data with the merchant supplied signature key" (EA6), but that Davis teaches "encrypting transaction data with the merchant supplied signature key . . . to generate a merchant signature" (EA6). The examiner concludes that it would have been obvious "to apply the merchant-supplied signature key of Davis et al. to the receipt authentication method of Tognazzini for the purpose of adding a level of encryption safeguard to the electronic transaction since both references pertain to smart card transactions and since the encryption step [is] simply a matter of protecting the security of the transaction" (EA6).

Appellant argues that Tognazzini indicates that optional digital signature may be generated and associated with receipt information, but no additional details are provided as to how

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these digital signatures are created (Br8). It is argued that Davis does not cure the deficiencies of Tognazzini (Br9).

We disagree with the examiner's finding that Tognazzini teaches, at column 4, line 67, to column 5, line 8, generating/storing a retail merchant identification number, a retail customer identification number, and transaction data. The cited portion of Tognazzini discloses generating an optional digital signature for assuring the authenticity of the receipt and applying it to the receipt information. However, Tognazzini does not disclose that the digital signature is created by encrypting transaction data, much less the three items of a retail merchant identification number, a retail customer number, and transaction data, as claimed. The digital signature could just be the signature of the store (e.g., Nordstrom's). The examiner does not rely on any other portion of Tognazzini to support the rejection. The examiner admits that Tognazzini does not disclose encrypting with a merchant supplied signature and relies on Davis. As we found in connection with the anticipation rejection of claim 14, Davis does not disclose encrypting a retail merchant identification number, a retail customer identification number, and transaction data with a merchant supplied signature key to generate a merchant signature, and, thus, neither Tognazzini nor Davis teach these claim limitations. Tognazzini's disclosure of applying the digital signature to

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receipt information implies generating a record comprising a digital signature and transaction data, but not the digital signature containing the specific encrypted information claimed. We conclude that the examiner has failed to establish a prima facie case of obviousness. Accordingly, the obviousness rejection of claims 1-13 and 25 is reversed.

#### Claims 26-30

Claim 26 is broader than claims 1, 6, 10, and 14 because it requires only encrypting "data comprising a retail record having at least one element related to a transaction" with a merchant supplied signature key to generate a merchant signature and does not require encrypting "a retail merchant identification number" and "a retail customer identification number." Claim 26 does require generating a record comprising the merchant signature and detailed transaction data, as shown in Fig. 6. As discussed in the connection with the rejection of claims 1-13 and 25, Tognazzini discloses applying a digital signature to receipt information (col. 5, lines 1-2), but does not disclose that the digital signature is created by encrypting transaction data. The digital signature could just be the signature of the store. The examiner does not address the rejection of claim 26 separately from claim 1 and has not shown how Davis cures the deficiencies of Tognazzini. Accordingly, we conclude that the examiner has

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failed to establish a prima facie case of obviousness. The obviousness rejection of claims 26-30 is reversed.

CONCLUSION

The rejections of claims 1-16 and 25-30 are reversed.

REVERSED

KENNETH W. HAIRSTON	)	
Administrative Patent Judge	)	
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	)	
	)	BOARD OF PATENT
JERRY SMITH	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
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	)	
LEE E. BARRETT	)	
Administrative Patent Judge	)	

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