

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

Paper No. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MASAHIDE KANEKO, ATSUSHI KOIKE, YOSHINORI HATORI,
SEIICHI YAMAMOTO, and NORIO HIGUCHI

Appeal No. 1997-1586
Application No. 08/183,671

Heard: May 22, 2001

Before JERRY SMITH, RUGGIERO, and DIXON, **Administrative Patent Judges**.
DIXON, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-3, which are all of the claims pending in this application.

We REVERSE.

BACKGROUND

The appellants' invention relates to a picture synthesizing method and apparatus. The system synthesizes lip movements from an input string of characters to form realistic speech in the image corresponding to the phonemes derived from the string of characters. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. A picture synthesizing method for synthesizing a moving picture of a person's face having mouth-shape variations from a train of input characters,

comprising the steps of:

developing from the train of input characters a train of phonemes, utilizing a speech synthesis technique outputting, for each phoneme, a corresponding vocal sound feature including articulation mode and its duration of each corresponding phoneme of the train of phonemes;

determining for each phoneme a mouth-shape feature corresponding to each phoneme on the basis of the corresponding vocal sound feature, said mouth-shape feature including the degree of opening of the mouth, the degree of roundness of the lips, the height of the lower jaw in a raised and a lowered position, and the degree to which the tongue is seen,

determining values of mouth-shape parameters, for each phoneme, for representing a concrete mouth-shaped on the basis of the mouth-shape feature; and

controlling the values of the mouth-shape parameters, for each phoneme, for each frame of the moving picture in accordance with the duration of each phoneme, thereby synthesizing the moving picture having mouth-shape variations matched with a speech output audible in case of reading the train of input characters.

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The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Harrison, III, et al. (Harrison)	3,662,374	May 9, 1972
Barnett et al. (Barnett)	4,653,100	Mar. 24, 1987

Claims 1-3 stand rejected under 35 U.S.C. § 103 as being unpatentable over Harrison in view of Barnett.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the examiner's answer (Paper No. 11, mailed Mar. 4, 1997) for the examiner's reasoning in support of the rejections, and to the appellants' brief (Paper No. 10, filed Dec. 16, 1996) and reply brief (Paper No. 13, filed Jun. 6, 1997) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

Appellants argue that the prior art to Harrison does not teach or suggest the determination of mouth shape characteristics/features determined on the basis of vocal

sound feature including articulation mode and its duration of each phoneme from a train of phonemes. (See brief at page 11.) We agree with appellants. While we agree with the examiner that Harrison teaches the basics of image simulation/synthesis of a mouth from a spoken input, Harrison does not teach or suggest the invention pertaining to the determination of the duration of the phoneme for a more realistic speech synthesis. Harrison teaches that the user can adjust the settings of potentiometers, etc. (see Harrison at col. 6) to adjust the desired animating effects. While it appears that the examiner implies that the system of Harrison would be updated to use a computer in a digital environment (see answer at pages 3-4), the examiner does not come to grips with the language of claim 1 with respect to the determination of the duration of the phonemes for more realistic speech correlation.

Appellants argue that Barnett is not relevant to the invention. (See brief at page 16.) We disagree with appellants. We agree with the examiner that the skilled artisan would have found it obvious that either sound or text may have been used equivalently as and input to the system and that the teachings of Barnett or admitted prior art in Figure 6 of appellants' specification would have taught artisans how to carry out the basic conversion for text into phonemes.

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Appellants argue that Harrison does not teach or suggest the mouth shape variations/features as recited in the language of claim 1. (See brief at page 13.) We agree with appellants. Here again the examiner has found basic teachings in Harrison concerning the image of the mouth, but does not come to grips with the language of claim 1 with respect to the controlling the values of mouth shape parameters in accordance with the duration of each phoneme which are matched to the audible speech output.

Since the combination of the prior art does not teach or suggest the claimed invention as recited in claim 1, we cannot sustain the rejection of claim 1. Similarly, claims 2 and 3 contain similar limitations, and we cannot sustain the rejection of claims 2 and 3.

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CONCLUSION

To summarize, the decision of the examiner to reject claims 1-3 under 35 U.S.C. § 103 is reversed.

REVERSED

JERRY SMITH)	
Administrative Patent Judge)	
)	
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)	
)	BOARD OF PATENT
JOSEPH F. RUGGIERO)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
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)	
JOSEPH L. DIXON)	
Administrative Patent Judge)	

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