



US005289375A

# United States Patent [19]

[11] Patent Number: 5,289,375

Fukumochi et al.

[45] Date of Patent: Feb. 22, 1994

[54] TRANSLATION MACHINE

[75] Inventors: Yoji Fukumochi, Ikoma; Hitoshi Suzuki, Nara; Shuzo Kugimiya, Nara; Ichiko Sata, Nara; Tokuyuki Hirai, Yamato-Koriyama, all of Japan

[73] Assignee: Sharp Kabushiki Kaisha, Osaka, Japan

[21] Appl. No.: 641,738

[22] Filed: Jan. 15, 1991

[30] Foreign Application Priority Data

Jan. 22, 1990 [JP]	Japan	1-2146
Jan. 22, 1990 [JP]	Japan	1-2147
Jan. 26, 1990 [JP]	Japan	1-7116

[51] Int. Cl.<sup>5</sup> ..... G06F 15/38; G06G 7/60

[52] U.S. Cl. .... 364/419,02

[58] Field of Search ..... 364/419, 226.4

[56] References Cited

U.S. PATENT DOCUMENTS

4,661,924	4/1987	Okamoto et al.	364/900
4,706,212	11/1987	Toma	364/900
4,791,587	12/1988	Doi	364/900
4,814,988	3/1989	Shiotani et al.	364/419
4,821,230	4/1989	Kumano et al.	364/900
4,887,212	12/1989	Zamora et al.	364/419
4,931,936	6/1990	Kugimiya et al.	364/419
4,953,088	8/1990	Suzuki et al.	364/419
4,962,452	10/1990	Nogami et al.	364/419

FOREIGN PATENT DOCUMENTS

0266001	of 0000	European Pat. Off.
0274281	of 0000	European Pat. Off.

0403057	12/1990	European Pat. Off.
57-69362	4/1982	Japan
61-18074	1/1986	Japan
61-74069	4/1986	Japan
62-271057	11/1987	Japan
63-221475	9/1988	Japan
1-166258	6/1989	Japan
1-233560	6/1989	Japan
2211639	of 0000	United Kingdom
2211640	of 0000	United Kingdom

Primary Examiner—Donald E. McElheny, Jr.  
Assistant Examiner—Laura Brutman  
Attorney, Agent, or Firm—Nixon & Vanderhye

[57] ABSTRACT

A translation machine having a storing unit for storing information of words and grammar rules, the translation machine being capable of translating sentences described in a source language into a target language includes a unit for dividing input sentence described in the source language into morphologic elements and for generating a mark-inserted sentence by adding a mark which represents an information of the detected morphologic elements, a unit connected to the dividing unit for analyzing a syntax of the morphologic elements in accordance with the information stored in the storing unit, and a unit connected to the analyzing unit for converting a structure of the syntax obtained in the dividing unit into a structure of syntax in the target language so that translated sentence is generated on a basis of the syntax structure in the target language obtained by the converting unit.

9 Claims, 12 Drawing Sheets

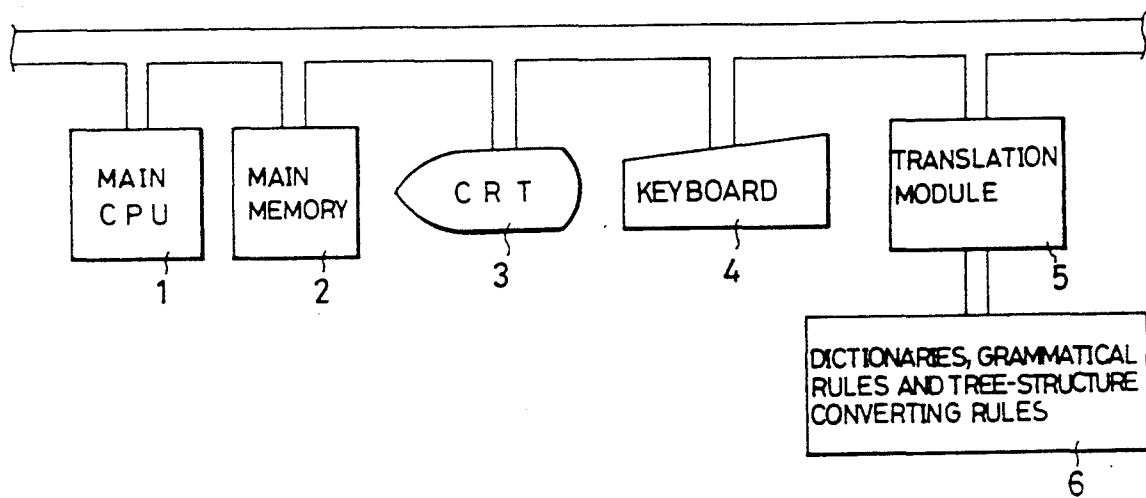


Fig. 1

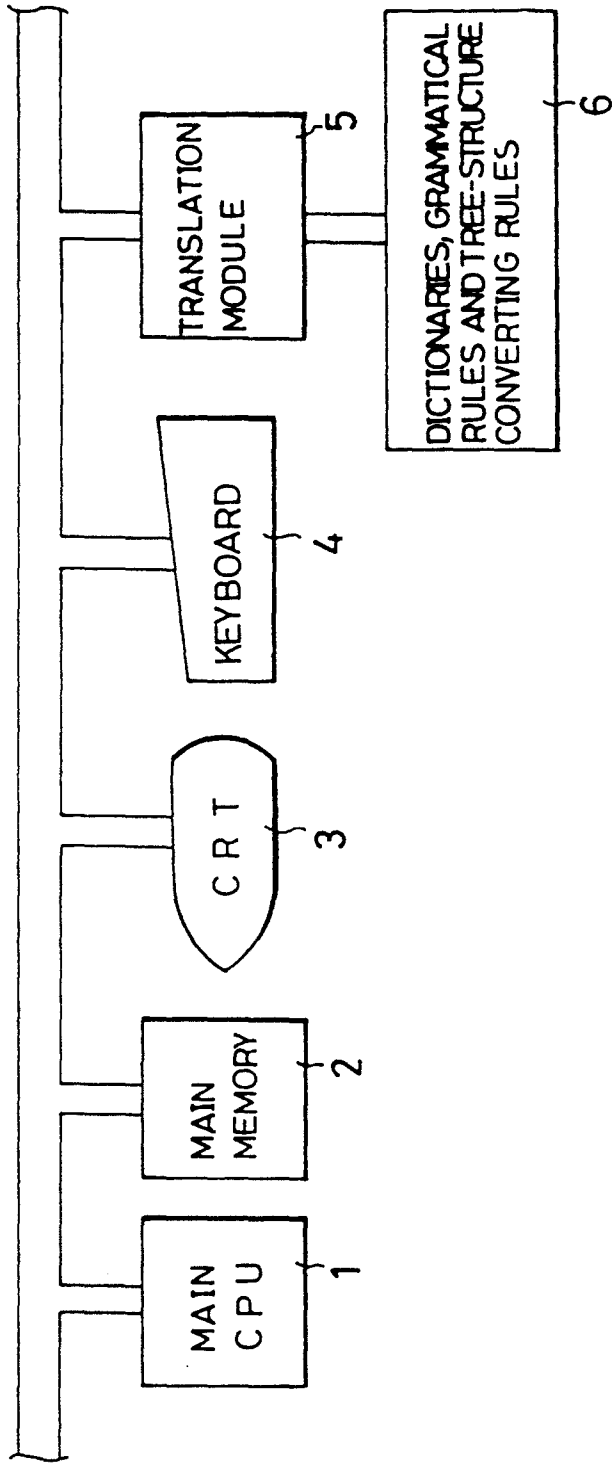


Fig. 2

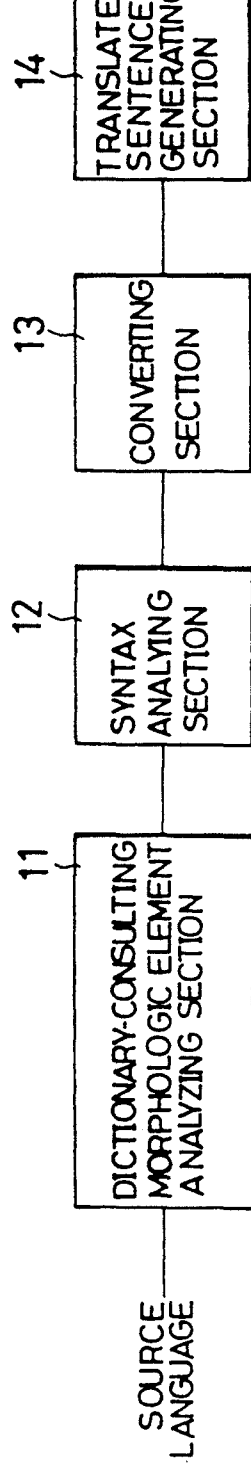


Fig. 3

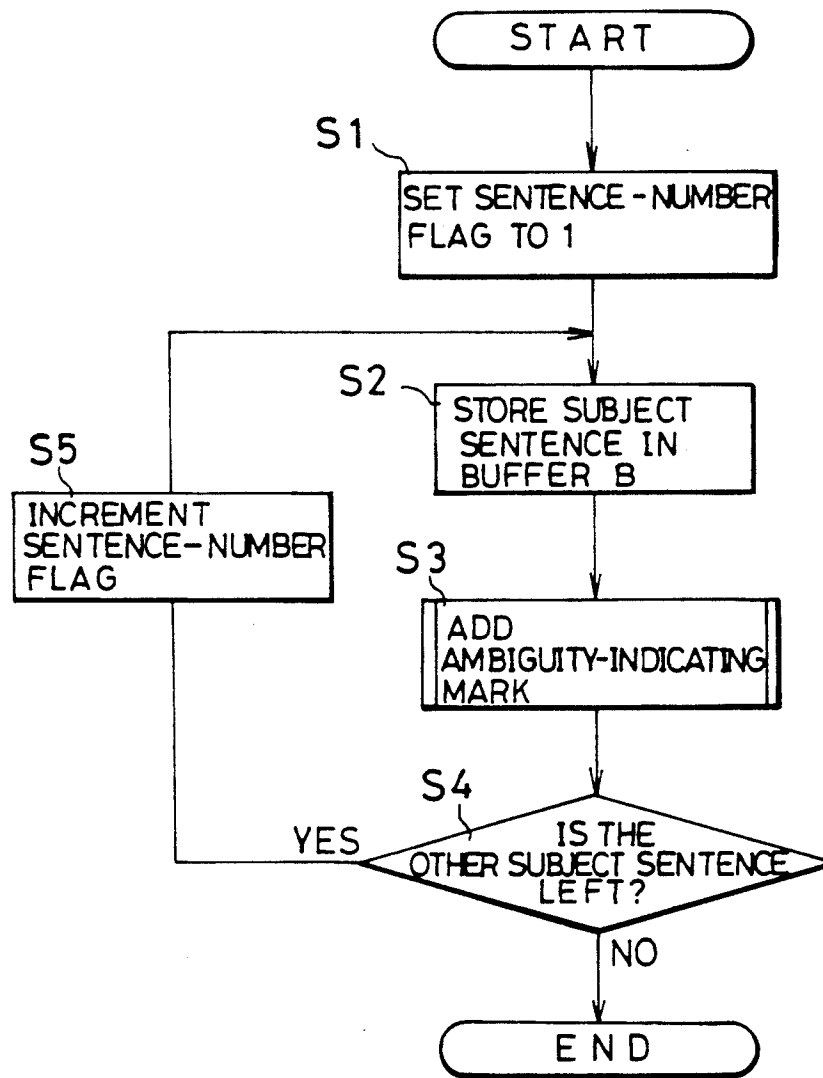
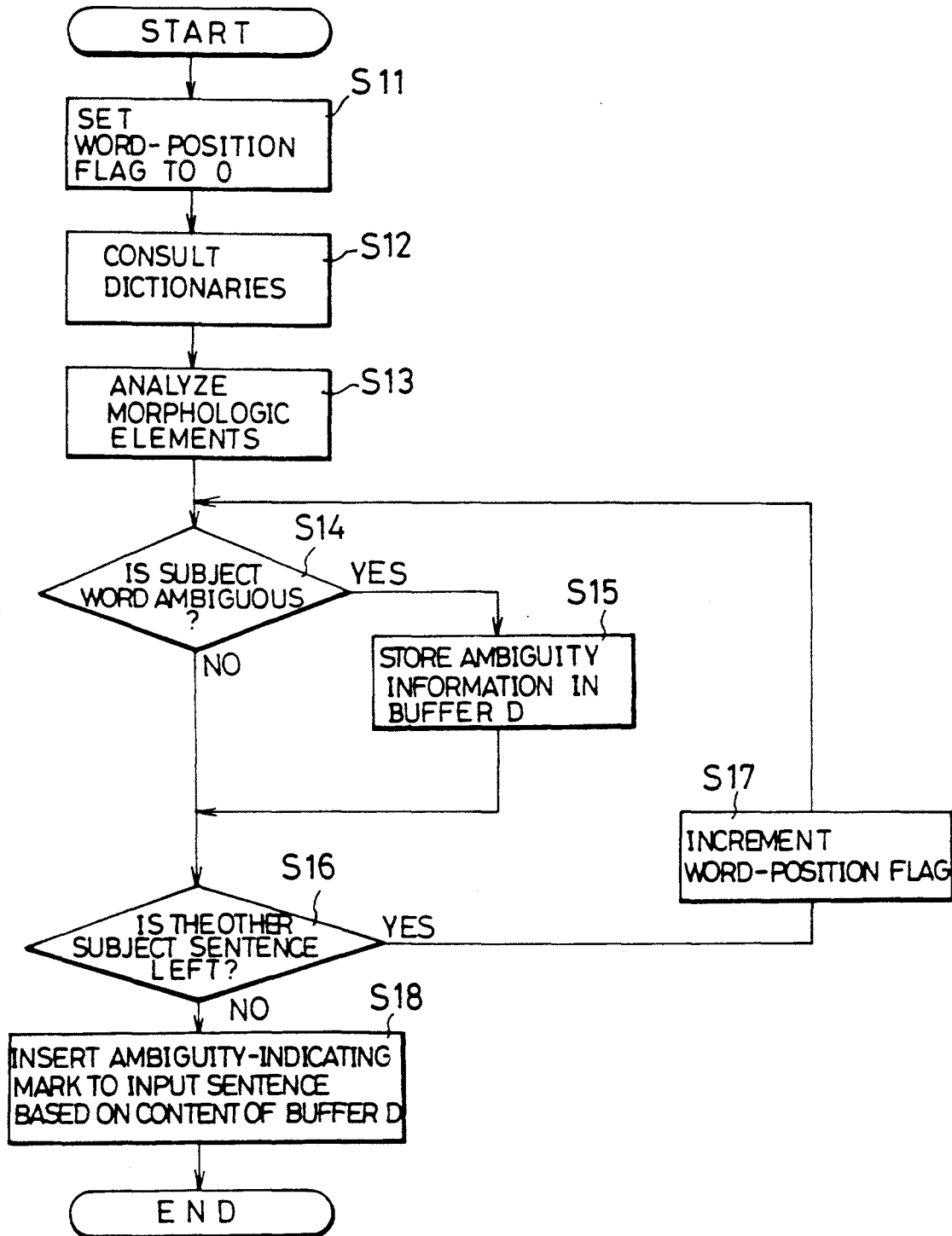


Fig. 4



# Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

## API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

## LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

## FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

## E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.