



US008548939B2

(12) **United States Patent**
Enenkiel

(10) **Patent No.:** **US 8,548,939 B2**
(45) **Date of Patent:** **Oct. 1, 2013**

(54) **METHODS, SYSTEMS AND COMPUTER PROGRAMS FOR PROCESSING DATA IN A WORLD-WIDE-WEB SERVICE ENVIRONMENT**

(75) Inventor: **Achim Enenkiel**, Karlsruhe (DE)

(73) Assignee: **SAP AG**, Walldorf (DE)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 642 days.

(21) Appl. No.: **11/108,644**

(22) Filed: **Apr. 19, 2005**

(65) **Prior Publication Data**
US 2006/0047764 A1 Mar. 2, 2006

(30) **Foreign Application Priority Data**
Apr. 21, 2004 (EP) 04009396

(51) **Int. Cl.**
G06F 17/30 (2006.01)

(52) **U.S. Cl.**
USPC **707/607; 707/703; 705/77; 705/78**

(58) **Field of Classification Search**
None
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,799,156	A *	1/1989	Shavit et al.	705/26
4,947,028	A *	8/1990	Gorog 235/380	
5,317,688	A *	5/1994	Watson et al.	715/707
5,383,113	A *	1/1995	Kight et al.	705/40
5,701,451	A *	12/1997	Rogers et al.	707/1
5,809,144	A *	9/1998	Sirbu et al.	705/53
5,991,733	A *	11/1999	Aleia et al.	705/8
6,389,403	B1 *	5/2002	Dorak, Jr.	705/52
6,442,526	B1 *	8/2002	Vance et al.	705/5

6,604,135	B1	8/2003	Rogers et al.	
6,850,950	B1 *	2/2005	Clarke et al.	707/104.1
7,707,120	B2 *	4/2010	Dominguez et al.	705/78
2001/0049632	A1	12/2001	Rigole	
2002/0087583	A1 *	7/2002	Morgan et al.	707/200
2003/0172090	A1 *	9/2003	Asunmaa et al.	707/200
2004/0133479	A1 *	7/2004	Grove et al.	705/26
2005/0065993	A1 *	3/2005	Honda et al.	709/200

FOREIGN PATENT DOCUMENTS

EP	0 969 430	A1	1/2000
EP	1 081 617	A2	3/2001
WO	WO 02/037393	A2	5/2002

OTHER PUBLICATIONS

Anders Tornqvist et al., "XML and Objects—the future for e-Forms on the Web," Enabling Technologies: Infrastructure for Collaborative Enterprises, 1999. (Wet Ice '99). Proceedings IEEE 8th International Workshops on Stanford, CA, USA, Jun. 16-18, 1999, Los Alamitos, CA, USA, IEEE Compt. Soc., US, Jun. 16, 1999, pp. 303-308. European Search Report, dated Dec. 3, 2004 (3 pages).

* cited by examiner

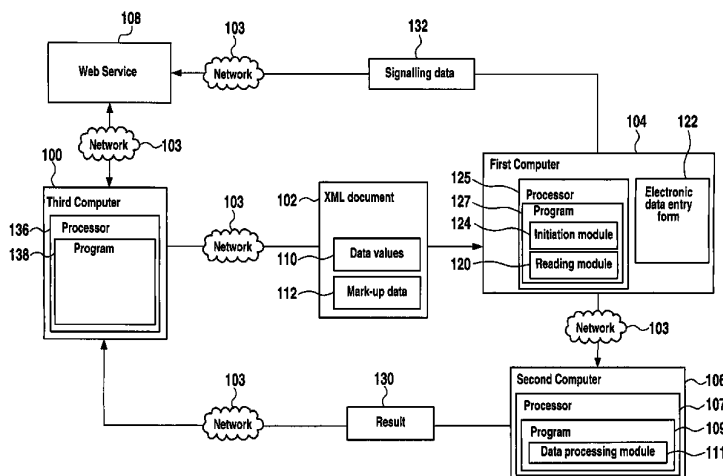
Primary Examiner — Debbie Le

(74) *Attorney, Agent, or Firm* — Finnegan, Henderson, Farabow, Garrett & Dunner, LLP

(57) **ABSTRACT**

Methods, systems and computer programs are provided for processing data in a web service environment. In accordance with one embodiment, a data processing method is provided that comprises: entering data values into respective data entry fields of an electronic data entry form of a first computer; entering an identifier of a web service into the first computer; initiating a data processing stage to be performed by a second computer on the basis of the data values entered into the electronic data entry form by the first computer; sending signalling data for signalling initiation of the data processing stage to a web service; and sending a result of the data processing stage to a third computer, the third computer being coupled to the web service.

29 Claims, 5 Drawing Sheets



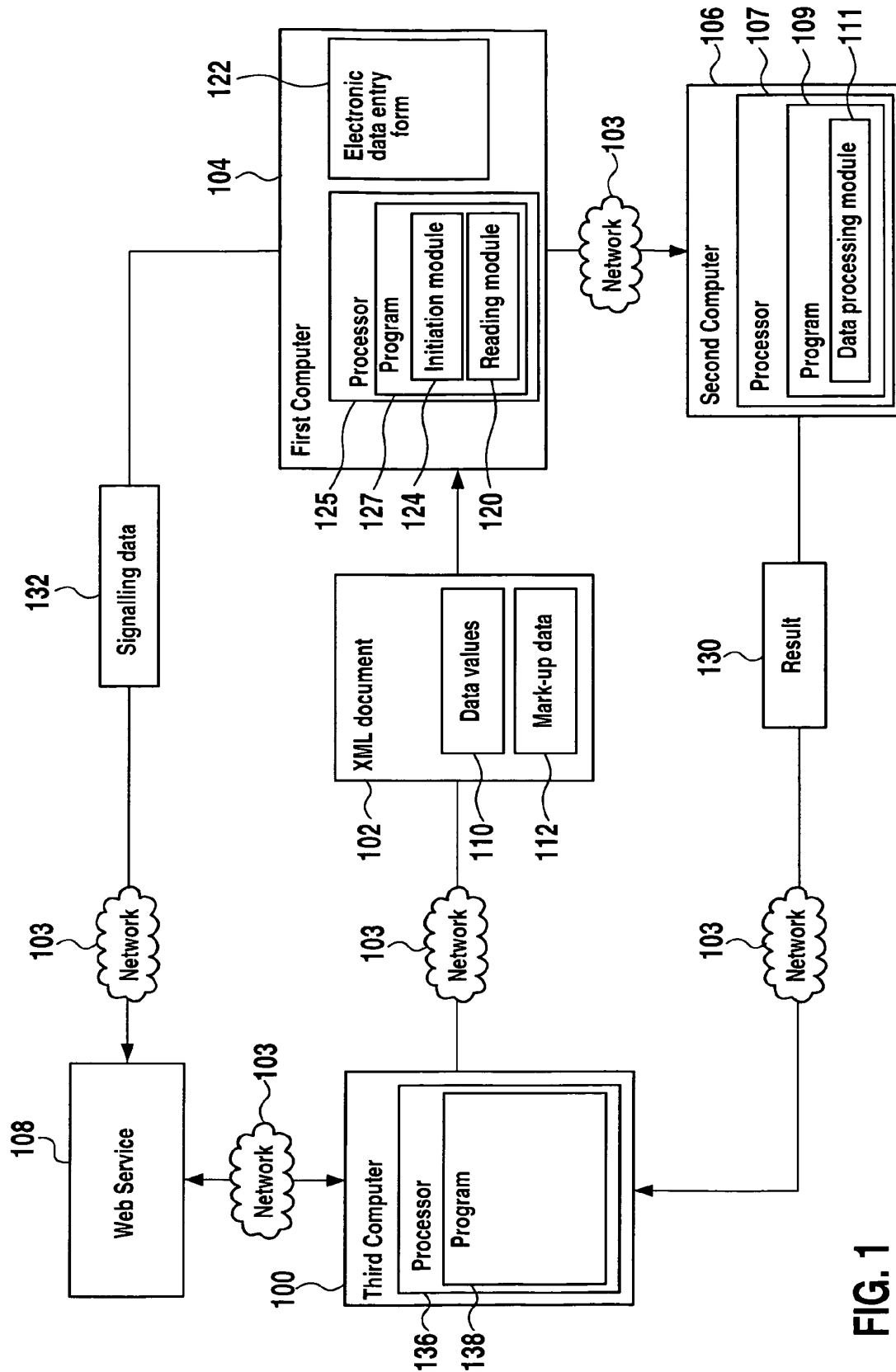


FIG. 1

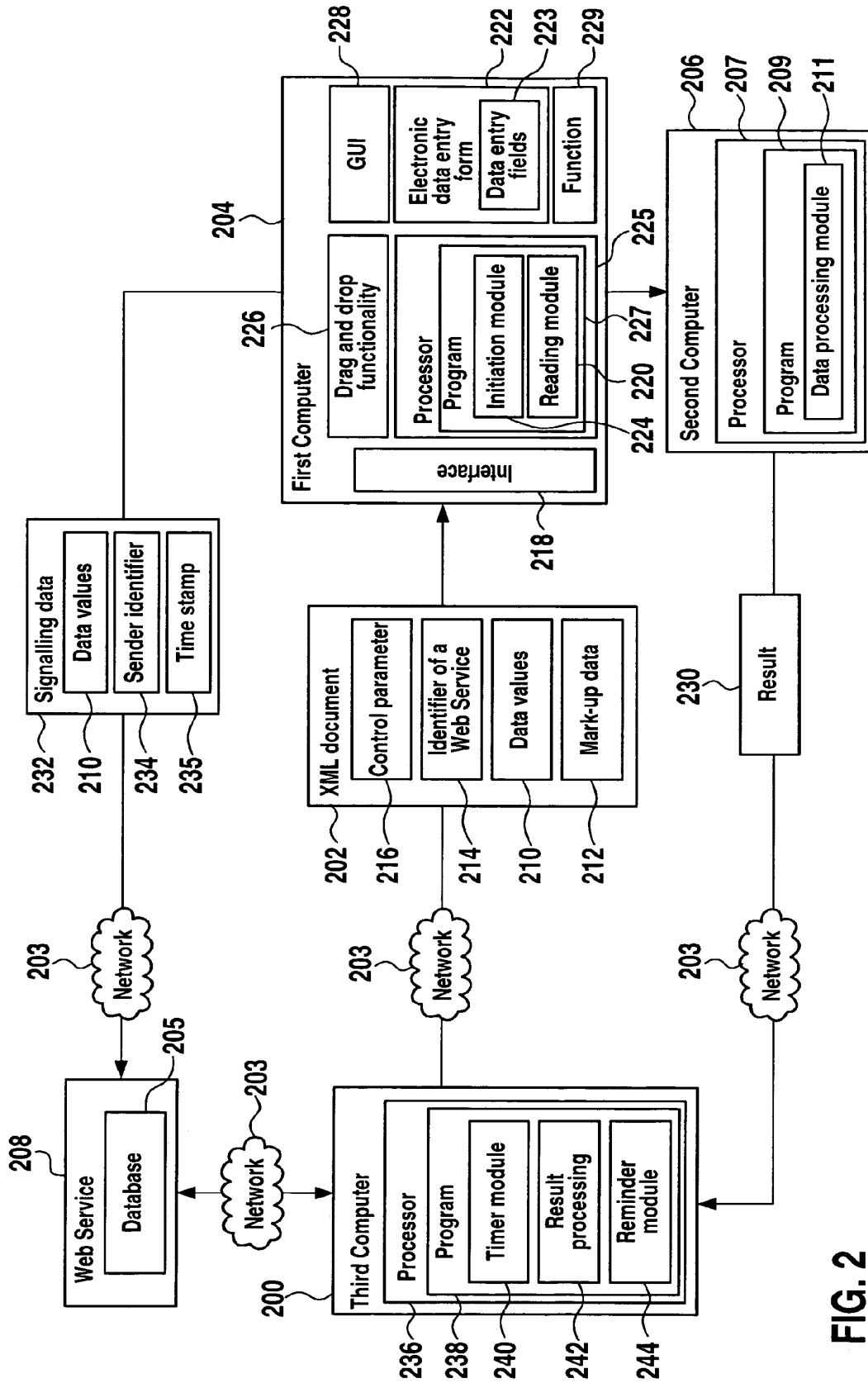


FIG. 2

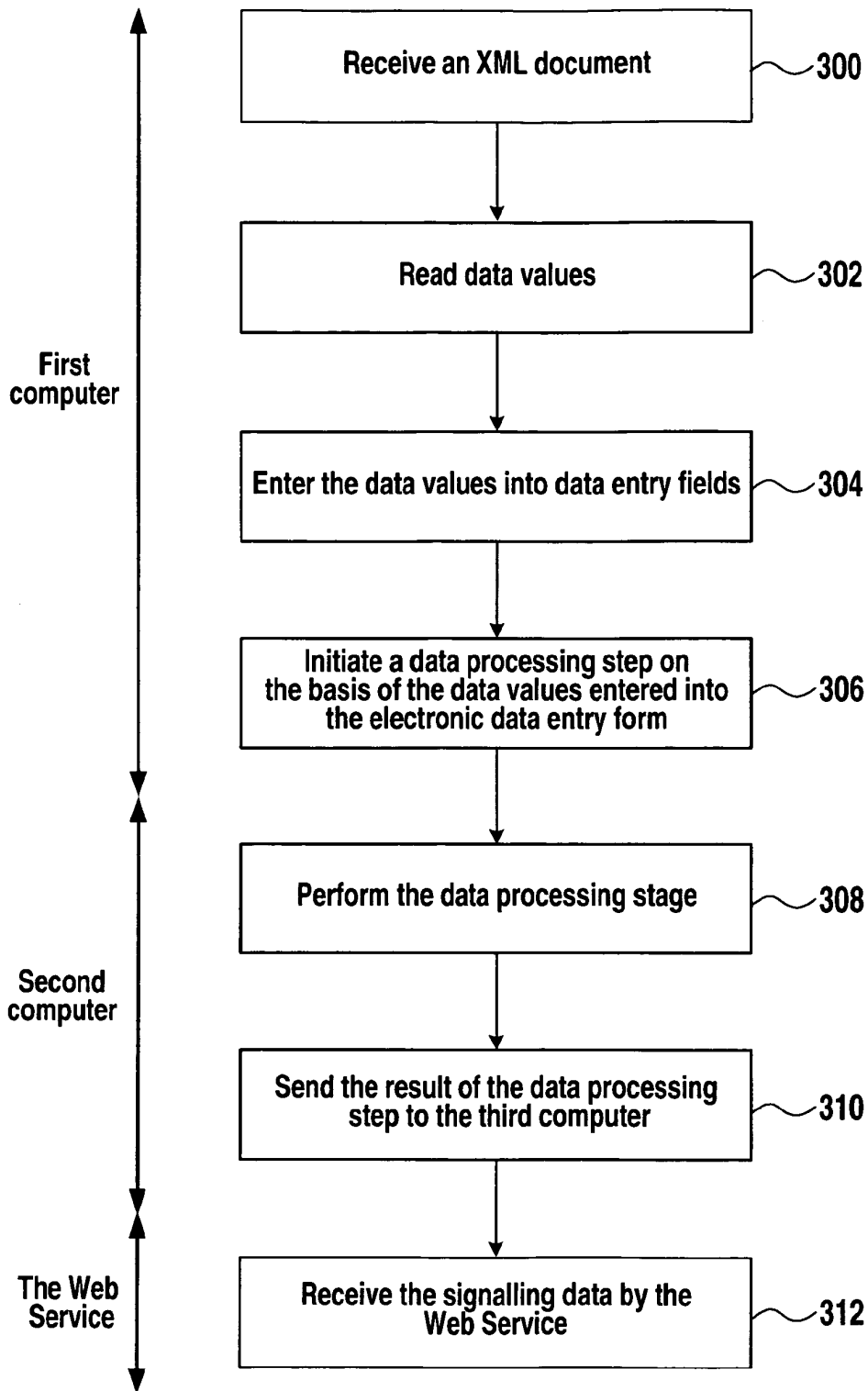


FIG. 3

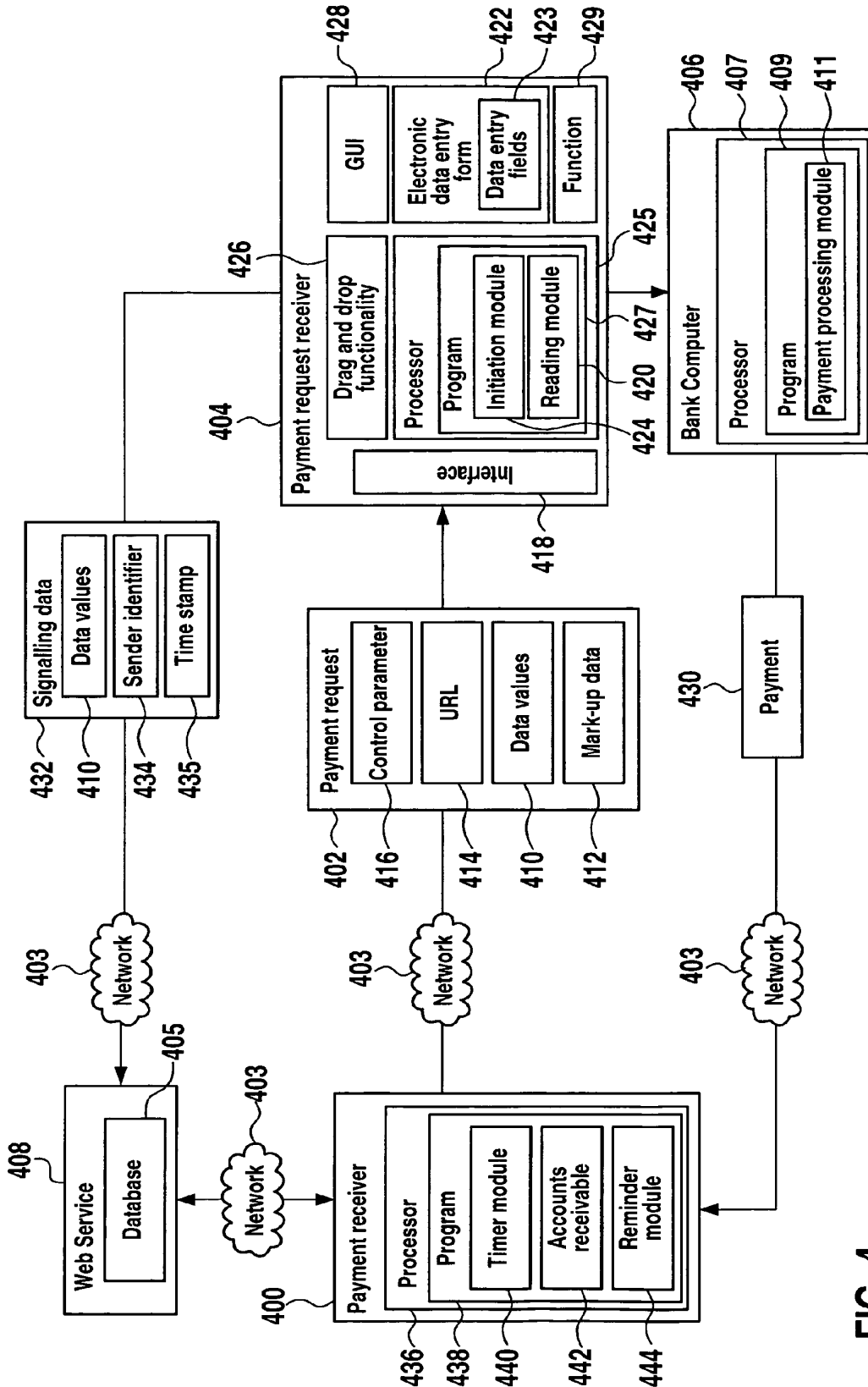


FIG. 4

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.