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(54) **SYSTEM AND METHOD FOR MONITORING RISK IN A SYSTEM DEVELOPMENT PROGRAM**

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(56) **References Cited**

U.S. PATENT DOCUMENTS

4,783,752 A	*	11/1988	Kaplan et al.	706/48
4,860,213 A	*	8/1989	Bonissone	706/52
4,942,527 A	*	7/1990	Schumacher	705/9
5,172,313 A	*	12/1992	Schumacher	705/7
5,189,606 A	*	2/1993	Burns et al.	705/10
5,208,898 A	*	5/1993	Funabashi et al.	706/45
5,293,585 A	*	3/1994	Morita	706/45
5,446,885 A	*	8/1995	Moore et al.	706/45
5,586,021 A	*	12/1996	Fargher et al.	700/100
5,630,127 A	*	5/1997	Moore et al.	705/1
5,737,727 A	*	4/1998	Lehmann et al.	705/7
5,987,443 A	*	11/1999	Nichols et al.	706/11
6,278,981 B1	*	8/2001	Demblo et al.	705/36

FOREIGN PATENT DOCUMENTS

WO WO 00/23928 * 4/2000 G06F/17/60

OTHER PUBLICATIONS

Managing Risk as Product Development Schedules Shrink, Preston G. Smith, (1999) Industrial Research Institute, Inc.*
Natural Resources Canada, Performance Report (1998) Minister of Public Works and Government Services Canada.*

Risk Assessment and Management Process (RAMP), State of North Carolina Department of Commerce, Information Resource Management (1998).*

RISK newsletter, Society for Risk Analysis, vol. 18, No. 3 (1998).*

* cited by examiner

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(57) **ABSTRACT**

A computerized system and method are provided that may be used to project a plurality of risk levels that may develop during the course of a large development project. A plurality of inputs are stored and converted for use to a metric that is used by an expert knowledge rule based system to determine a plurality of risk levels that develops relating to successful completion of a large development program with respect to elements such as cost, time of delivery, and quality. A plurality of outputs are provided in a form that can be used by a program manager to reduce the level of risk that may arise. In a preferred embodiment, the plurality of outputs are provided in a quantified manner that may relate to a probability of failure of one or more aspects of the development program. The rules are based on the knowledge and experience of experts and are predetermined so that risk levels are objectively quantified prior to beginning the project rather than subjectively determined during the course of the project. The system can be implemented on a PC and can be used by a metric analyst or program manager.

23 Claims, 3 Drawing Sheets

