

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TESLA INC.,
Petitioner,

IPR2025-00341
U.S. Patent No. 7,181,743

**DECLARATION OF DR. EREZ ZADOK,
UNDER 37 C.F.R. § 1.68 IN SUPPORT OF PETITION FOR
INTER PARTES REVIEW**

TABLE OF CONTENTS

I.	Introduction.....	8
A.	Materials Considered.....	8
II.	Qualifications and Professional Experience.....	10
III.	Level of Ordinary Skill in the Art	21
IV.	Relevant Legal Standards	22
V.	Technical Background.....	23
A.	General Computer Operations.....	23
1.	Networking Overview.....	26
B.	Networked and Distributed Systems.....	30
1.	Clustering, Quality-of-Service, and Load Balancing.....	32
C.	Virtualization.....	35
VI.	Overview of the '743 Patent.....	39
A.	Summary of the '743 patent	39
B.	Prosecution History	46
C.	Priority Date of the '743 Patent.....	47
VII.	Claim Construction.....	49
VIII.	Identification of how the Claims are Unpatentable.....	49
A.	Ground 1: Claims 10, 11, 14, 16, and 18 are obvious under 35 U.S.C. § 103 over Welch alone and in combination with Ravindran.	51
1.	Summary of Welch	51
2.	Summary of Ravindran	59

3. Motivation to Combine Welch and Ravindran .. 60
4. Claim 10. 61
 - (a) [10.0] Software stored on at least one host for converting N networked hosts into a resource managed system instantiating M managed characteristic application computer programs, each managed characteristic application computer program managed by one of the N networked hosts, the software comprising:61
 - (b) [10.1] a first function group which monitors the host and network resources;71
 - (c) [10.2] a second function group which provides application computer program event reporting and event correlation capabilities;77
 - (d) [10.3] a third function group which provides reasoning and decision making capabilities for the resource managed system,85
 - (e) [10.4] wherein the third function group comprises: a first function which determines a state and health of the N hosts, a network operatively coupling the N hosts to one another and the M managed characteristic application computer programs in the distributed environment;91
 - (f) [10.5] a second function which determines required allocation and reallocation actions needed to

- maintain a plurality of Quality of Service (QoS) requirements established for the M managed characteristic application computer programs, the QoS requirement dictating parameters regarding service quality of the M management characteristic application programs; and100
- (g) [10.6] a third function which generates automatic control signal requests corresponding to the actions dictated by the QoS requirements, such that the managed characteristic application computer programs are moved, shutdown, and started in accordance with satisfaction of the QoS requirements; and106
- (h) [10.7] a fourth function group which provides program control capabilities permitting starting, stopping, and configuring of selected ones of the M managed characteristic application computer programs on respective ones of the N hosts in the resource managed system,.....110
- (i) [10.8] where M and N are positive integers and where M may be equal to, greater than, or less than N.....113
5. Claim 11.....115
- (a) [11] The software as recited in claim 10, wherein the first function receives system specification information comprising host configuration and capabilities.115

6. Claim 14. 119
- (a) [14] The software as recited in claim 10, wherein the first function receives program control information comprising application status and detected application faults for each of the M managed characteristic application computer programs, and detected failures regarding the N hosts. 119
7. Claim 16. 123
- (a) [16] The software as recited in claim 10, wherein the first function receives application performance data representing each one of the M managed characteristic application computer programs. 123
8. Claim 18. 124
- (a) [18.0] The software as recited in claim 10, wherein the second function which determines the required allocation and reallocation actions established for the M managed characteristic application computer programs by: 124
- (b) [18.1] responding to application and host failures by determining if and what recovery actions should be taken; 124
- (c) [18.2] determining if and where to place new copies of managed characteristic application computer programs or which managed characteristic application computer



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