

**IN THE UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF TEXAS  
FORT WORTH DIVISION**

MIDAS GREEN TECHNOLOGIES, LLC,  
PLAINTIFF,

V.

IMMERSION SYSTEMS LLC,  
DEFENDANT.

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CASE NO. 4:20-cv-00555-O

JURY TRIAL DEMANDED

PATENT CASE

**DECLARATION OF MAURICE J. MARONGIU ON DISPUTED CLAIM TERMS**

## Table of Contents

I.	Qualifications, Experience, and Publications .....	<del>- 3 -</del> <del>-3-</del>
II.	Compensation .....	<del>- 5 -</del> <del>-5-</del>
III.	Prior Testimony .....	<del>- 5 -</del> <del>-5-</del>
IV.	Materials Considered. ....	<del>- 6 -</del> <del>-6-</del>
V.	Summary of Opinions .....	<del>- 6 -</del> <del>-6-</del>
VI.	The Patents-in-Suit and Relevant Technology .....	<del>- 7 -</del> <del>-7-</del>
A.	Background Technology .....	<del>- 7 -</del> <del>-7-</del>
B.	The Claims .....	<del>- 7 -</del> <del>-7-</del>
VII.	Claim Construction Principles .....	<del>- 10 -</del> <del>-10-</del>
VIII.	Level of Skill in the Art .....	<del>- 11 -</del> <del>-11-</del>
IX.	Background Information .....	<del>- 11 -</del> <del>-11-</del>
X.	Two Disputed Claim Terms/Phrases: .....	<del>- 19 -</del> <del>-19-</del>

I, Maurice J Marongiu, declare, under penalty of perjury, as follows:

1. I am a consulting engineer and expert on the subject of thermal management and engineering for electronics. I submit this Declaration in relation to Plaintiff's Brief on Disputed Claim Terms for Construction of MIDAS GREEN TECHNOLOGIES, LLC, ("MGT" or "Plaintiff"). In particular, I submit this Declaration to provide relevant background information regarding the technology at issue in U.S. Patent No. 10,405,457 (the '457 Patent or "Patent-in-Suit") (attached as **Exhibit 1**), and U.S. Patent No. 10,820,446 (the '446 Patent or "Patent-in-Suit") (attached as **Exhibit 2**) and to set forth my opinions about the meaning of certain disputed claim terms in the '457 Patent and '446 Patent from the perspective of a person of ordinary skill in the pertinent field.

#### **I. Qualifications, Experience, and Publications**

2. The following is a brief summary of my background and qualifications. My background and qualifications are more fully set out in my curriculum vitae (CV), attached as **Exhibit 3**.

3. My current position is President of MJM Engineering Co. and PCM Thermal Solutions. MJM Engineering Co. is a consulting firm specialized in the design and development of thermal management systems for electronics and telecommunications applications. PCM Thermal Solutions is a consulting firm specialized in the analysis, design, and development of thermal engineering applications.

4. I received my B.S. degree in Mechanical Engineering from the University of Illinois at Urbana-Champaign in 1980. I received in 1982 my M.S. in Mechanical Engineering and, in 1985, I earned a doctorate in Mechanical Engineering, both degrees from the University of Illinois at Urbana-Champaign. The emphasis in my graduate studies was experimental/analytical methods applied to thermal and fluid mechanics problems to include electronics and telecom systems.

5. I have over 10 years of engineering teaching experience in the thermal engineering areas. I was a visiting assistant professor of mechanical engineering at Texas A&M University at College Station, TX and adjunct assistant professor at Illinois Institute of Technology (IIT) in Chicago, as well as graduate teaching assistant at the University of Illinois at Urbana-Champaign. I have taught heat transfer, fluid mechanics, thermodynamics, thermal systems, thermal management, experimental methods, and other courses at the undergraduate and graduate levels as well as conducted research projects in thermal management, heat transfer and fluid mechanics.

6. In 1995, I founded MJM Engineering Co. after several years of performing part-time consulting projects for the electronics/telecommunications industry in the Chicago area. My area of expertise is the thermal analysis, design, development, and troubleshooting of thermal management systems of electric, electronic and telecommunication components and systems as well as other engineering applications. My expertise includes heat exchanger design, thermal system design and optimization, fluid mechanics and convection heat transfer, and cooling of electronic systems, including phase change materials. I have been active professionally, being a member of ASME (American Society of Mechanical Engineers), IEEE (Institute of Electrical and Electronics Engineers), ISHM (International Society of Hybrid and Microelectronics), IEPS (International Electronics Packaging Society), Cryogenics Society of America, and AIAA (American Institute of Aeronautics and Astronautics). I was chairman of ASME Fox Valley Local Section and member of ASME Ad Hoc Computational Heat Transfer Committee. I am currently a contributor in Electronics Cooling, which is a paper and online magazine. I have taught undergraduate and graduate courses concerning fluid mechanics, heat transfer, thermodynamics, and thermal systems for over 10 years.

7. As shown in my CV, I have authored or co-authored over 20 publications. I am an inventor of a U.S. patent (US 8,541,721) titled “Wake Generating Elements for Joule Heating or Infrared Heating”.

## **II. Compensation**

8. I am being compensated for my time spent on this matter at the rate of \$150/hr. plus reasonable expenses. My compensation is not related to the outcome of this action, and I have no financial interest in this case.

## **III. Prior Testimony**

9. Although I have been hired to consult as expert (with the intention to provide testimony as requested), I have not testified as an expert in any litigation during the last four years. However, I have served as an expert witness in the following cases in the last 4 years:

- a) LINDA ANDREW a/k/a JANE DOE, a Florida resident, Plaintiff, v. RADIANCY, INC., a foreign corporation; PHOTOMEDEX, INC., a foreign corporation; and DOLEV RAFAELI, a New Jersey Resident, Case Nr. 6:16-CV-1061-ORL-37GJK, UNITED STATES DISTRICT COURT FOR THE MIDDLE DISTRICT OF FLORIDA, ORLANDO DIVISION, 2017;
- b) Manufacturing Resources International, Inc. Plaintiff, v. Civiq Smartsapes, LLC, Civiq Holdings, LLC, Comark, LLC, and Comark Holdings, LLC, Case Nr. 17 cv-00269-UN, UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE 2018; and
- c) 3M COMPANY, Plaintiff, v. NEOLOGY, INC. and EQUITY PARTNERS VI, L.P., Case Nr. C.A. No. N18C-07-089 AML CCLD, SUPERIOR COURT FOR THE STATE OF DELAWARE, 2020.

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