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(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2022/0369510 A1**
Heydari (43) **Pub. Date: Nov. 17, 2022**(54) **INTELLIGENT REFRIGERANT
DISTRIBUTION UNIT FOR DATACENTER
COOLING SYSTEMS**(71) Applicant: **Nvidia Corporation**, Santa Clara, CA
(US)(72) Inventor: **Ali Heydari**, Albany, CA (US)(21) Appl. No.: **17/318,797**(22) Filed: **May 12, 2021****Publication Classification**(51) **Int. Cl.**
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7/20818 (2013.01); **H05K 7/20836** (2013.01)(57) **ABSTRACT**

Systems and methods for cooling a datacenter are disclosed. In at least one embodiment, a refrigerant distribution unit (RDU) distributes first refrigerant from a refrigerant reservoir to one or more cold plates to extract heat from at least one computing device and also interfaces between a first refrigerant cooling loop having a first refrigerant and a second refrigerant cooling loop, so that a second refrigerant cooling loop uses second refrigerant to dissipate at least part of such heat through a second condenser unit to an ambient environment.

