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Heydari(10) **Pub. No.: US 2022/0369519 A1**(43) **Pub. Date: Nov. 17, 2022**(54) **INTELLIGENT
REFRIGERANT-TO-REFRIGERANT HEAT
EXCHANGER FOR DATACENTER COOLING
SYSTEMS***G06N 10/00* (2006.01)*G06N 3/02* (2006.01)(52) **U.S. CL.**CPC *H05K 7/20827* (2013.01); *H05K 7/1497*
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(57)

ABSTRACT

Systems and methods for cooling a datacenter are disclosed. In at least one embodiment, a refrigerant-to-refrigerant heat exchanger (R2RHX) interfaces between a first refrigerant cooling loop and a second refrigerant cooling loop to enable transfer of heat from a cold plate of a first refrigerant cooling loop to a second refrigerant cooling loop using a first condenser unit, and so that a second refrigerant cooling loop enables dissipation of heat to an ambient environment from a second condenser unit.

