NEW US PATENT FOR COOPERATIVE WIRELESS NETWORK INVENTION
DIRECT APPLICATION TO MULTI DRONE DEFENCE CAPABILITIES
LOWER POWER AND INCREASED BANDWITH FOR WIRELESS NETWORKS

Highlights:

- US Grant of ground breaking patent enabling effective defense against swarms of drones and drones moving across networks
- Technology also enables significant increase in cellular data bandwidth capacity and lower power requirements for Wi-Fi and radio networks
- Applications in the 3GPP LTE-Advanced standard, 4G and next generation "5G" wireless networks
- Department 13 now owns 8 Granted Patents and 11 Patent Applications

Kunene Resources Limited (ACN 155 396 893) (**Kunene** or the **Company**) (**KNE**) is pleased to announce that **Department 13** LLC (**D13**), of which Kunene has agreed to acquire 100%, has received a new US patent grant on technology that will further enhance D13's drone defence capabilities to address swarms of drones and drones moving across networks. There are also significant broader applications in Wi-Fi and cellular communications networks relating to lower power needs and increased bandwidth capacity.

The new US Patent 9136931 has been licenced to D13 by GenghisComm Holdings, the IP holding company of D13's Chief Science Officer (CSO), Steve Shattil under the terms of the existing exclusive Licence with D13.

Mr Shattil is the inventor of dozens of US and foreign patents essential to wireless and radio protocols standards, including 3GPP (3G cellular), LTE (4G Cellular), 802.11n (Wi-Fi), 802.16 (WiMax), and 802.20 (Mobile Broadband).

The invention, "Cooperative Wireless networks" will provide an unprecedented increase in data bandwidth via radio networks, as well as having direct application to drone defence technology by dramatically enabling ad-hoc networks used to detect and communicate with airborne targets. It is related to earlier inventions by Mr Shattil in the field of Cooperative MIMO technology that is also exclusively licensed to D13.

D13 CEO Jonathan Hunter said, "Coop MIMO technology is a hugely powerful tool to enable radio networks to work collaboratively between a variety of radio nodes, to improve bandwidth, and lower power requirements. Instead of each receiver/transmitter having to take a divided share of the available signal, Coop MIMO technology enables radios to work together by exploiting mutual interference, and thus enhance capacity of radio networks".

Mr Hunter said "drone defence would be enhanced through the invention because a network would be able to adapt and even chase a moving target through antenna selection across networks. The invention allows multiple counter drone defense systems working

together to cooperatively track a swarm of drones greatly enhancing the ability to detect and counter hostile multi drone systems compared to a collection of independent systems".

Regarding the broader benefits of Coop MIMO technology, the ability to increase cellular bandwidth capacity is becoming increasingly important as competition for bandwidth rises with additional users, data transmission and streaming services. It is expected that there will be significant interest in the Technology from telecommunications companies.

The acquisition of D13 by Kunene continues on schedule.

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ABOUT D13

D13 was founded in Virginia in 2010 by a team of former military operators, scientists and engineers who apply proprietary innovative advanced technology to emerging requirements.

D13 is developing cutting edge software and communication systems that have the potential to transform the networking and communication fields as well as current applications in drone defense, mobile phone IT security and secure enhanced android phone systems.

D13 has 8 patents and 11 patent applications in the development of wireless protocol manipulation and communication networking software with applications in:

- Drone defense;
- Local area and wide area cellular communications and networking;
- Enhanced data bandwidth for all digital communications
- Cyber security for mobile devices;
- Sophisticated applications in the RF environment (Radiometrics).

PATENT DETAILS
COOPERATIVE WIRELESS NETWORKS (COOP MIMO) US PATENT NO. 9136931
Inventor: Steve Shattil
Assignee: GenghisComm Holdings LLC
Exclusive Licensee: Department 13 LLC