RAN Infrastructure Patent Pool

Joint Venture of

MPEG LA
Unified Patents
5G Radio Access Network (RAN) Controlled by Few

5G Subscriber Share by RAN Vendor, 2023

- Huawei, 24.8%
- Ericsson, 22.9%
- Nokia, 22.7%
- Others, 29.6%

Source: Strategy Analytics, 2019
An Open RAN Will Democratize the RAN Market

Radio Units (RUs) built on open interfaces and 3GPP standards will permit vendor choice

Significantly lower pricing

Lower network CAPEX costs

Enable RAN automation to lower OPEX and faster services roll out

Enable private and corporate access
New entrants lead to $100B in revenue by 2030

Outdoor ($B), Indoor ($B) and Shipments (M)

ABI Research 2019
Significant IP Hurdles Remain to a Democratized RAN

- RAN is the result of many inventions owned by different parties
- There are presently no licensing precedents
- Without easy affordable access to necessary IP rights, suppliers face cost uncertainty and potential for conflict
LTE & 5G RAN Architecture

Compressi on
- Header
- Ciphering
- Control Plane and User Plane Data Transfer

Error Correct
- Error Correct
- Random Access
- Modulation
- Scrambling
- Mapping
- Pre-coding
- Scheduling
- Addressing

Centralized Unit (CU)  Distributed Unit (DU)

Radio Unit (RU)
- Pe-Coding
- Cyclic-Prefix
- Beamforming
- Random Access
- Fourier Transforms
- Analog-Digital Conversion

Antenna

Alicum License Scope
Alium Pool Program

SEP Holders
- Nonexclusive License
- No cost to participate
- Recurring Royalties
- Help establish benchmark

Implementers
- One-Stop licensing
- Reconcile existing licenses
- Help establish benchmark

Eligibility
Allocation
Market Development
Royalty Distribution
Patent Quality
Enforcement
Auditing
License Scope

Worldwide patents essential to the LTE and 5G standards implemented in RAN RUs such as an O-RAN RU to the extent necessary to perform the functions of the baseband 7-2 physical layer split as defined by 3GPP
**License Terms**

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Royalty paid by End Product Seller on products in the form sold or distributed to an End User from January 1, 2022 forward.
Alium Is a Joint Venture

- Managed first and most successful Patent Pools
- Trusted, transparent, and independent
- Generated Billions of $ in royalties from 1000s of licensees
- Over $85 million earned per US patent in some pools

- Only entity which deters patent abuse
- Market leader in SEP analytics and tools
- Deep familiarity with RAN space
- Trusted by market leading implementers