

EXHIBIT 1019

EXHIBIT B2

U.S. Patent No. US 9,635,656 – TCL

Claim 3

Plaintiffs Mitsubishi Electric Corporation, and Sisvel International S.A. (collectively, “Plaintiffs”) provide evidence of infringement of at least claim 3 of U.S. Patent No. 9,635,656 (hereinafter “the ‘656 patent”) by TCL Communication Technology Holdings Limited, TCT Mobile International Limited, TCT Mobile, Inc., TCT Mobile (US) Inc., and TCT Mobile (US) Holdings Inc. (collectively “TCL”). In support thereof, Plaintiffs provides the following claim charts.

“Accused Instrumentalities” as used herein refers to mobile devices and data terminals made, used, sold and offered for sale, provided, and/or caused to be used, now and within the past six years, which are capable of communicating over LTE (Long Term Evolution) wireless communication networks within the United States. The LTE standard was developed by the 3GPP (3rd Generation Partnership Project), as specified in its Release 8 document series, along with minor enhancements described in Release 9. LTE is sometimes referred to as “3.95G” or “4G LTE” or “Advanced 4G”. Each of the Accused Instrumentalities is marketed by Defendant to be LTE-compatible, i.e., compliant with the LTE standard, either expressly or by reference to compatibility with 4G networks, which also requires such devices to be compatible with the LTE standard. Examples of the Accused Instrumentalities are included in Exhibit A, filed herewith. The following claim chart demonstrates TCL’s infringement by comparing each element of claim 3 to corresponding components, aspects, and/or features of the LTE standard. This claim chart is not intended to constitute an expert report on infringement. This claim chart includes information provided by way of example, and not by way of limitation.

The identification of Accused Instrumentalities based on Defendant’s public statements regarding compatibility/compliance with the LTE or 4G networks is based only upon information from publicly available resources regarding the Accused Instrumentalities, as TCL has not yet provided any non-public information. An analysis of TCL’s (or other third parties’) technical documentation may assist in fully identify all infringing devices made, use, sold, offered for sale or provided by TCL. Accordingly, Plaintiffs reserves the right to supplement its identification of Accused Instrumentalities once such information is made available to Plaintiffs. Furthermore, Plaintiffs reserves the right to revise this infringement analysis, as appropriate, upon issuance of a court order construing any terms recited in the asserted claims.

Plaintiffs provides this evidence of infringement and related analysis without the benefit of claim construction or expert reports or discovery. Plaintiffs reserves the right to supplement, amend or otherwise modify this analysis and/or evidence based on any such claim construction or expert reports or discovery.

Unless otherwise noted, Plaintiffs contends that TCL directly infringes the ‘656 patent in violation of 35 U.S.C. § 271 by selling, offering to sell, making, using, and/or importing the Accused Instrumentalities. The following exemplary analysis demonstrates that infringement. Unless otherwise noted, Plaintiffs further contends that the evidence below supports a finding of indirect infringement under 35 U.S.C. §§ 271(b) and/or (c), in conjunction with other evidence of liability under one or more of those subsections. TCL makes, uses, sells, imports, or offers for sale in the United States, or has made, used, sold, imported, or offered for sale in the past, without authority, or induces others to make, use, sell, import, or offer for sale in the United States, or has induced others to make, use, sell, import, or offer for sale in the past, without authority products, equipment, or services that infringe claim 3 of the ‘656 patent, including without limitation, the Accused Instrumentalities.

PLAINTIFFS' ANALYSIS OF INFRINGEMENT

Unless otherwise noted, Plaintiffs believes and contends that each element of each claim asserted herein is literally met through TCL's provision of the Accused Instrumentalities. However, to the extent that TCL attempts to allege that any asserted claim element is not literally met, Plaintiffs believes and contends that such elements are met under the doctrine of equivalents. More specifically, in its investigation and analysis of the Accused Instrumentalities, Plaintiffs did not identify any substantial differences between the elements of the patent claims and the corresponding features of the Accused Instrumentalities, as set forth herein. In each instance, the identified feature of the Accused Instrumentalities performs at least substantially the same function in substantially the same way to achieve substantially the same result as the corresponding claim element.

To the extent the chart of an asserted claim relies on evidence about certain specifically-identified Accused Instrumentalities, Plaintiffs asserts that, on information and belief, any similarly-functioning instrumentalities also infringes the charted claim. Plaintiffs reserves the right to amend this infringement analysis based on other products made, used, sold, imported, or offered for sale by TCL. Plaintiffs also reserves the right to amend this infringement analysis by citing other claims of the '656 patent, not listed in the claim chart, that are infringed by the Accused Instrumentalities. Plaintiffs further reserves the right to amend this infringement analysis by adding, subtracting, or otherwise modifying content in the "Accused Instrumentalities" column of each chart.

US 9635656 – Claim 3	Illustrative Sections of relevant 3GPP Specification to which the Accused Instrumentalities are compliant
A mobile terminal configured to: transmit a quality notification signal for notifying downlink communication quality to a base station, and transmit a scheduling request signal with which to make a request for allocation of radio resources to said base station before transmitting transmission data to said base station, wherein said mobile terminal includes: a transmitter configured to transmit said quality notification signal to said base station, and to transmit said scheduling request signal to said base station; and	The Accused Instrumentalities are mobile terminals configured to be operable on LTE networks. The Accused Instrumentalities are configured to transmit a quality notification signal for notifying downlink communication quality to a base station, and transmit a scheduling request signal with which to make a request for allocation of radio resources to said base station before transmitting transmission data to said base station, wherein said mobile terminal includes: a transmitter configured to transmit said quality notification signal to said base station, and to transmit said scheduling request signal to said base station. Specifically, the Accused Instrumentalities satisfy these elements because they must be compliant with the following Specifications: 3GPP TS 36.213 v9.0.1 7 Physical downlink shared channel related procedures ⋮ 7.2 UE procedure for reporting channel quality indication (CQI), precodingmatrix indicator (PMI) and rank indication (RI) The time and frequency resources that can be used by the UE to report CQI, PMI, and RI are controlled by the eNB. ⋮ CQI, PMI, and RI reporting is periodic or aperiodic. A UE shall transmit periodic CQI/PMI, or RI reporting on PUCCH as defined hereafter in subframes with no PUSCH allocation. A UE shall transmit periodic CQI/PMI or RI reporting on PUSCH as defined hereafter in subframes with PUSCH allocation, where the UE shall use the same PUCCH-based periodic CQI/PMI or RI reporting format on PUSCH. 3GPP TS 36.201 v9.0.0 5 Document structure of LTE physical layer specification ⋮ 5.5 TS 36.213: Physical layer procedures The scope of this specification is to establish the characteristics of the physical layer procedures, and to specify:

US 9635656 – Claim 3	Illustrative Sections of relevant 3GPP Specification to which the Accused Instrumentalities are compliant
	- Synchronisation procedures, including cell search procedure and timing synchronisation; - Power control procedure; - Random access procedure; - Physical downlink shared channel related procedures, including CQI reporting and MIMO feedback; - Physical uplink shared channel related procedures, including UE sounding and HARQ ACK/NACK detection; - Physical shared control channel procedures, including assignment of shared control channels. 3GPP TS 36.321 v9.1.0 5 MAC procedures ⋮ 5.4 UL-SCH data transfer ⋮ 5.4.4 Scheduling Request The Scheduling Request (SR) is used for requesting UL-SCH resources for new transmission
a controller configured to perform a first control process that includes, when the mobile terminal has not been allocated a radio resource for transmitting said transmission data, transmitting said scheduling request signal to said base station, and	The Accused Instrumentalities include a controller configured to perform a first control process that includes, when the mobile terminal has not been allocated a radio resource for transmitting said transmission data, transmitting said scheduling request signal to said base station. Specifically, the Accused Instrumentalities satisfy these elements because they must be compliant with the following Specifications: 3GPP TS 36.321 v9.1.0 5 MAC procedures ⋮ 5.4 UL-SCH data transfer

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	¶ 5.4.4 Scheduling Request The Scheduling Request (SR) is used for requesting UL-SCH resources for new transmission. When an SR is triggered, it shall be considered as pending until it is cancelled. All pending SR(s) shall be cancelled and sr-ProhibitTimer shall be stopped when a MAC PDU is assembled and this PDU includes a BSR which contains buffer status up to (and including) the last event that triggered a BSR (see subclause 5.4.5), or when the UL grant can accommodate all pending data available for transmission. If an SR is triggered and there is no other SR pending, the UE shall set the SR_COUNTER to 0. As long as one SR is pending, the UE shall for each TTI: - if no UL-SCH resources are available for a transmission in this TTI: - if the UE has no valid PUCCH resource for SR configured in any TTI: initiate a Random Access procedure (see subclause 5.1) and cancel all pending SRs; - else if the UE has a valid PUCCH resource for SR configured for this TTI and if this TTI is not part of a measurement gap and if sr-ProhibitTimer is not running: - if SR_COUNTER < dsr-TransMax: - increment SR_COUNTER by 1; - instruct the physical layer to signal the SR on PUCCH;
a second control process that includes, when a transmission of said quality notification signal coincides with that of said scheduling request signal in said transmitter, stopping transmitting said quality notification signal	The Accused Instrumentalities includes a controller configured to perform a second control process that includes, when a transmission of said quality notification signal coincides with that of said scheduling request signal in said transmitter, stopping transmitting said quality notification signal during a time interval during which said transmitter transmits said scheduling request signal. Specifically, the Accused Instrumentalities satisfy these elements because they must be compliant with the following Specifications:

US 9635656 – Claim 3	Illustrative Sections of relevant 3GPP Specification to which the Accused Instrumentalities are compliant
during a time interval during which said transmitter transmits said scheduling request signal.	3GPP TS 36.213 v9.0.1 7 Physical downlink shared channel related procedures ⋮ 7.2 UE procedure for reporting channel quality indication (CQI), precodingmatrix indicator (PMI) and rank indication (RI) The time and frequency resources that can be used by the UE to report CQI, PMI, and RI are controlled by the eNB. ⋮ 7.2.2 Periodic CQI/PMI/RI Reporting using PUCCH A UE is semi-statically configured by higher layers to periodically feedback different CQI, PMI, and RI on the PUCCH using the reporting modes given in Table 7.2.2-1 and described below. ⋮ The CQI/PMI or RI report shall be transmitted on the PUCCH resource $n^{(2)}_{PUCCH}$ as defined in [3], where $n^{(2)}_{PUCCH}$ is UE specific and configured by higher layers. In case of collision between CQI/PMI/RI and positive SR in a same subframe, CQI/PMI/RI is dropped.

Caveat: The notes and/or cited excerpts utilized herein are set forth for illustrative purposes only and are not meant to be limiting in any manner. For example, the notes and/or cited excerpts, may or may not be supplemented or substituted with different excerpt(s) of the relevant reference(s), as appropriate. Further, to the extent any error(s) and/or omission(s) exist herein, all rights are reserved to correct the same.