

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TEXARKANA DIVISION**

MAXELL, LTD.,

Plaintiff,

v.

TCL Electronics Holdings Ltd. (f/k/a TCL Multimedia Technology Holdings, Ltd.); TCL Industries Holdings Co., Ltd.; T.C.L. Industries Holdings (H.K.) Limited; TTE Corporation; TCL Moka International Limited; TCL Moka Manufacturing S.A. de C.V.; TCL King Electrical Appliances (Huizhou) Co. Ltd.; Manufacturas Avanzadas S.A. de C.V.; TCL Smart Device (Vietnam) Co., Ltd.; Shenzhen TCL New Technology Co., Ltd.; TCL Optoelectronics Technology (Huizhou) Co., Ltd.; TCL Overseas Marketing Ltd.; and TCL Technology Group Corporation (f/k/a TCL Corp.),

Defendants.

Civil Action No. 5:23-CV-00108-RWS-
JBB

DEMAND FOR JURY TRIAL

DEFENDANTS' INVALIDITY CONTENTIONS

Pursuant to Patent L.R. 3-3 and the Court’s Scheduling Order, Defendants TCL Electronics Holdings Ltd. (f/k/a TCL Multimedia Technology Holdings, Ltd.); TCL Industries Holdings Co., Ltd.; T.C.L. Industries Holdings (H.K.) Limited; TCL Moka International Limited; TCL Moka Manufacturing S.A. de C.V.; TCL King Electrical Appliances (Huizhou) Co. Ltd.; Manufacturas Avanzadas S.A. de C.V.; TCL Smart Device (Vietnam) Co., Ltd.; Shenzhen TCL New Technology Co., Ltd.; TCL Optoelectronics Technology (Huizhou) Co., Ltd.; TCL Overseas Marketing Ltd.; and TCL Technology Group Corporation (f/k/a TCL Corp.) (“TCL”), though its undersigned counsel, hereby provides the following Invalidity Contentions to Plaintiffs Maxell, Ltd. (“Plaintiff”).

As set forth in Plaintiff’s infringement contentions dated April 10, 2024, Plaintiffs allege infringement of the following Asserted Claims for each of the Patents-in-Suit under the respective statutory subsections of 35 U.S.C. § 271:

- For the ’366 patent, claims 5, 6, and 9.
- For the ’780 patent, claims 1-4, and 6.
- For the ’341 patent, claim 3.
- For the ’558 patent, claims 1, 5, 6, 9, 13, and 14.
- For the ’020 patent, claims 1-4, 21, 24, and 28.
- For the ’206 patent, claims 1-5, 9-13, 16, and 17.

I. GENERAL STATEMENTS

A. Reservation of Rights and Objections

These contentions are based on information reasonably available to TCL at this time, are necessarily preliminary, and may require subsequent amendment, alteration or supplementation. The information set forth below is provided without waiving: (1) the right to object to the use of any statement for any purpose, in this action or any other action, on the grounds of privilege, relevance, materiality or any other appropriate grounds; (2) the right to object to any request involving or relating to the subject matter of the statements herein; or (3) the right to revise, correct,

supplement, or clarify any of the statements provided below at any time. TCL also reserves the right to amend these contentions based on expert or fact discovery, any future claim construction (including positions by the parties and determinations by the Court) or any other subsequent clarification or development with respect to the meaning of any term used in the asserted claims, any additional information or findings relating to the priority dates for the asserted claims, or based on discovery not yet produced to TCL (including by Plaintiffs or any third-party). These contentions do not constitute any concession by TCL for purposes of claim construction or infringement. By including prior art and arguments in its Invalidity Contentions, TCL is not admitting to the accuracy of any particular claim construction.

Prior art not included in these contentions, whether known or unknown to TCL, may become relevant to the extent that Plaintiff will contend that any of the limitations of the asserted claims are not disclosed in the prior art identified herein. Accordingly, TCL reserves the right to identify any additional prior art that may relate to the allegedly missing limitations. Additionally, TCL reserves the right to assert invalidity under 35 U.S.C. § 102(g) to the extent that Plaintiffs seek to antedate any Section 102(a) or 102(e) reference identified herein.

Discovery in this case is in its preliminary stage, and the claim construction process has yet to begin. TCL has conducted the invalidity analysis herein based at least in part and in some instances entirely upon Plaintiffs' apparent interpretation of the claims of the Asserted Patents. By charting the prior art against the claims herein, TCL is not admitting nor agreeing to Plaintiff's interpretation of the claims at issue in this case. TCL reserves the right to raise any invalidity issue identified at any point in these contentions, whether they be raised in the charts, the narratives for each patent or the description of the prior art or cited in any portion of the prior-art references discussed or listed herein or in the attached appendices or within the general knowledge and skill of the person of ordinary skill in the art.

Additionally, the claim charts attached as exhibits provide representative examples of portions of the charted reference(s) that disclose the indicated limitations under Plaintiffs' application of the claims; additional portions of the prior art other than the representative examples

provided herein may also disclose the indicated limitation(s), and TCL contends that asserted claims of each Asserted Patent is invalid in light of the charted reference(s) as a whole.

TCL reserves the right to rely on additional citations or sources of evidence that also may be applicable, or that may become applicable in light of claim construction, changes in Plaintiff's infringement contentions, and/or information obtained during discovery as the case progresses.

B. Incorporation by Reference

In addition to the prior art identified below, TCL incorporates by reference the prosecution file histories of the Asserted Patents, including any arguments, cited prior art, or claim rejections made by the USPTO set forth in such prosecution histories.

C. Common Sense And Knowledge Of A Person Of Ordinary Skill In The Art

In connection with the contentions set forth herein, TCL may rely on common sense and/or the general knowledge of a person of ordinary skill in the art ("POSITA") at the time of the alleged inventions, including to provide background in connection with presenting its Initial Contentions.

D. Prior Art Identification And Citation

These invalidity contentions provide representative examples of how the references disclose the asserted claims. It should be recognized that a POSITA would generally read a prior-art reference as a whole and in the context of other publications, literature, and general knowledge in the field. To understand and interpret any specific statement or disclosure in a prior-art reference, a POSITA would rely upon other information including other publications and general scientific or medical knowledge. Thus, additional portions of the disclosed prior art references may also disclose the limitations of the asserted claims, and TCL reserves the right to rely on additional citations or sources of evidence, including other unidentified portions of the prior-art references, other publications, or expert testimony to provide context and to aid understanding and interpretation of any identified portions, including those references identified in Part II.A.

TCL also reserves the right to rely upon other portions of the prior-art references, other publications, and the testimony of experts to establish that the alleged inventions were inherently disclosed in the prior art, and/or would have been obvious to a POSITA, including on the basis of

modifying or combining certain cited references. TCL also reserves the right to rely upon any prior art or admissions relating to prior art in the Asserted Patents and/or their respective prosecution histories. In addition, TCL reserves the right to rely on all prior art produced by Plaintiffs or any other party in any other proceeding including re-examinations, oppositions, and *inter partes* review involving the Asserted Patents, if any.

II. BACKGROUND OF THE TECHNOLOGY

The Asserted Patents and Asserted Claims recite technology that is well-understood, routine, and conventional before the priority date of each Asserted Patent. For example, USB, LAN, JPEG, Televisions Operating systems, and functions such as using remote devices, including smart phones, to control televisions were all well-known at that time.

A. USB

Over a decade before the Asserted Patents in this case, USB 1.0 was released in January of 1996—and it was not even the first version of USB. *See* Universal Serial Bus Specification 1.0 at 2 (rev. 1.0 Jan. 15, 1996). The Universal Serial Bus was designed as means for connecting PC to telephone and to provide a “ubiquitous link that can be used across a wide range of PC to telephone interconnects.” *Id.* at 11. The Universal Serial Bus purported to be “the answer to connectivity for the PC architecture” as “a fast, bidirection, isochronous, low-cost, dynamically attachable serial interface that is consistent with the requirements of the PC platform of today and tomorrow.” *Id.*

<u>PERFORMANCE</u>	<u>APPLICATIONS</u>	<u>ATTRIBUTES</u>
LOW SPEED •Interactive Devices •10-100 Kb/s	Keyboard, Mouse Stylus Game peripherals Virtual Reality peripherals Monitor Configuration	Lower cost Hot plug-unplug Ease of use Multiple peripherals
MEDIUM SPEED •Phone, Audio, Compressed Video 500Kb/s - 10Mbps	ISDN PBX POTS Audio	Low cost Ease of use Guaranteed latency Guaranteed Bandwidth Dynamic Attach-Detach Multiple devices
HIGH SPEED •Video, Disk •25-500 Mb/s	Video Disk	High Bandwidth Guaranteed latency Ease of use

Figure 3-1. Application Space Taxonomy

The Defendants reserve the right to rely on any of the USB standards in establishing the invalidity or ineligibility of the Asserted Patents.

B. Local Area Network (“LAN”)

Local Area Network (“LAN”) has been around since the 1960s. As an early example, Robert Metcalf of Xerox Corporation, in 1973, developed the prototype of the Ethernet board. Smithsonian, *The National Museum of American History*, https://web.archive.org/web/20141028132431/http://americanhistory.si.edu/collections/search/object/nmah_687626.

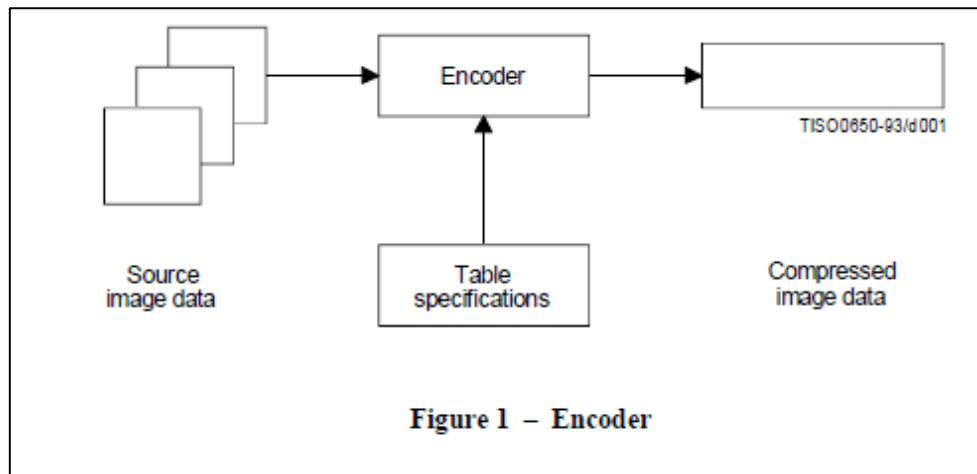
The IEEE has promulgated standards for LAN. For example, the 802.11 standard (e.g., WiFi) has existed as a standard for wireless LAN since 1997. IEEE SA, *The Evolution of Wi-Fi Technology and Standards* (May 16, 2023), <https://standards.ieee.org/beyond-standards/the-evolution-of-wi-fi-technology-and-standards>.

Defendants reserve the right to rely on any LAN standard, including the 802.11 standard in establishing the invalidity or ineligibility of the Asserted Patents.

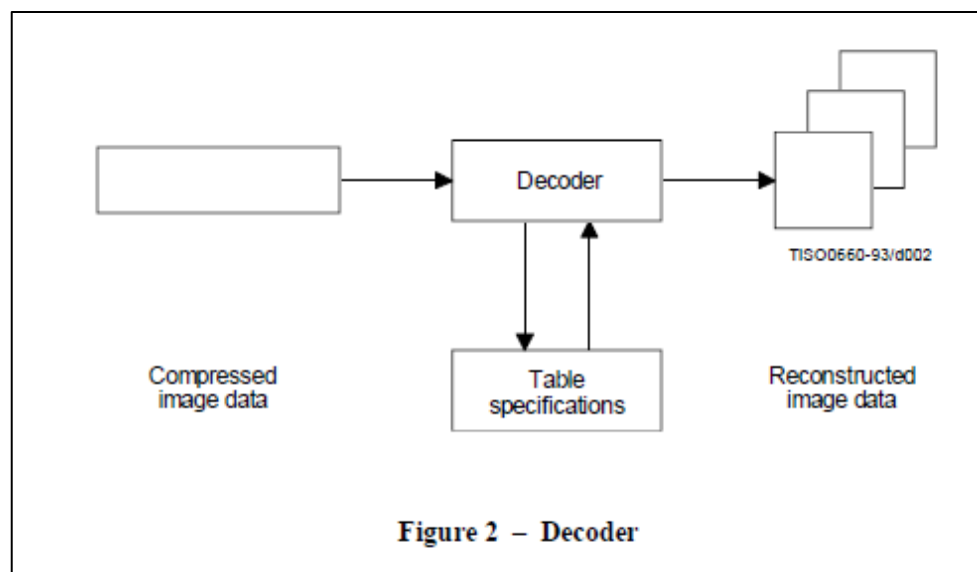
C. JPEG

The Joint Photographic Experts Group (“JPEG”) was introduced in 1992 as ISO/IEC 10918-1. The JPEG standard sets forth three elements: (1) the encoder; (2) the decoder; and (3) the interchange format. ISO/IEC 10918-1 1993 at 13.

The *encoder* “takes as input *digital source image data* and *table specifications*, and by means of a specified set of *procedures* generates as output *compressed image data*.” *Id.* The *decoder* “takes as input *compressed image data* and *table specifications*, and by means of a specified set of *procedures* generates as output *digital reconstructed image data*.” *Id.* The *interchange format* “includes all *table specifications* used in the encoding process[,] ... for exchange between *application environments*.” *Id.*



Id.



Id.

The Defendants reserve the right to rely on any of the JPEG standards to establish the invalidity of ineligibility of the Asserted Patents.

D. Television Operating Systems

LinuxTV was one of the first smart television operating systems. It was originally developed as a kernel for set-top boxes. *See, e.g.,* Linuxtv.org, *Main Page – View History* (Sep. 25, 2004), https://www.linuxtv.org/wiki/index.php?title=Main_Page&oldid=558; LinuxTV, Wikipedia <https://en.wikipedia.org/wiki/LinuxTV>.

Roku was later developed from the Roku framework. While its early set-top boxes, such as the Roku PhotoBridge HD1000, existed and ran on the Linux system, Roku officially released its first streaming player in 2008. *Our Story*, Roku, <https://www.roku.com/about/history-of-roku>; Roku PhotoBridge HD1000, PCMag (Jan. 11, 2005), <https://www.pcmag.com/archive/roku-photobridge-hd1000-142475>.

The Roku PhotoBridge HD1000 allowed media files to be pulled directly from any storage device on the network. Roku PhotoBridge HD1000, PCMag (Jan. 11, 2005), <https://www.pcmag.com/archive/roku-photobridge-hd1000-142475>. By 2012, the Roku devices were able to do much more, including control the television using a smart phone and seamlessly switch between streaming applications such as Netflix, Amazon Prime, HBO Plus, and Hulu.

III. THE ASSERTED PATENTS ARE INVALID

A. Patent L.R. 3-3(a) Initial Identification Of Prior Art

The relevant prior art, as understood in the context of what was known as of the alleged priority date of the Asserted Patents, includes, without limitation, the art identified in the chart attached as Appendix 1. TCL provides these contentions explicitly reserving its right to challenge Plaintiffs' alleged priority dates.

B. Patent L.R. 3-3(b) and 3-3(c) Identification of Anticipation and Obviousness

TCL attaches Exhibits A-01 through F-18 identified below, which show the anticipation ("102") and/or obviousness ("103") of every Asserted Claim of each Asserted Patent. For clarity, TCL includes and incorporates by reference the previously served Exhibits A-01 through E-10.

Exhibit	Patent/claim	Invalidity Theory	Reference(s)
A-01	'366 Patent, claims 5, 6, and 9.	102 or 103	Chang, or in the alternative Chang in view of Bang, Shin, and/or Kim '767.
A-02	'366 Patent, claims 5, 6, and 9.	102 or 103	Shin, or in the alternative Shin in view of Bang, Chang, and/or Kim '767.
A-03	'366 Patent, claims	102 or 103	Kim '767, or in the alternative Kim '767 in

Exhibit	Patent/claim		Invalidity Theory	Reference(s)
	5, 6, and 9.		view of Bang and/or Chang.	
A-04	'366 Patent, claims 5, 6, and 9.	102 or 103	Palmateer, or in the alternative Palmateer in view of Bang and/or Chang.	
A-05	'366 Patent, claims 5, 6, and 9.	102 or 103	Kim, or in the alternative Kim in view of Shin, Bang, Chang, and/or Kim '767.	
A-06	'366 Patent, claims 5, 6, and 9.	102 or 103	Bang, or in the alternative Bang in view of Shin, Chang, and/or Kim '767.	
A-07	'366 Patent, claims 5, 6, and 9.	102 or 103	Gally, or in the alternative Gally in view of Bang and/or Chang.	
A-08	'366 Patent, claims 5-8	102 or 103	NEC AccuSync; ViewSonic	
A-09	'366 Patent, claims 9-10	102 or 103	NEC AccuSync; ViewSonic	
A-103	'366 Patent, claims 5, 6, and 9.	103	As set forth in the chart	
B-01	'780 Patent, claims 1-4, and 6	102 or 103	Lawther, or in the alternative Lawther in view of JPEG	
B-02	'780 Patent, claims 1-4, and 6	102 or 103	Adler, or in the alternative Adler in view of JPEG	
B-03	'780 Patent, claims 1-4, and 6	102 or 103	Nikon, or in the alternative Nikon in view of JPEG and/or Adler	
B-04	'780 Patent, claims 1-4, and 6	102 or 103	Rosencwaig, or in the alternative Rosencwaig in view of Nikon and/or Adler and/or Kodak and/or JPEG and/or Lawther	
B-05	'780 Patent, claims 1-4, and 6	102 or 103	CEIVA3 Digital Picture Frame, or in the alternative CEIVA3 Digital Picture Frame in view of Nikon and/or Kodak and/or Adler and/or JPEG and/or Lawther	
B-06	'780 Patent, claims 1-4, and 6	102 or 103	Kodak EasyShare Ex-811, or in the alternative EX-811 in view of JPEG and/or Lawther and/or Adler and/or Nikon	

Exhibit	Patent/claim		Invalidity Theory	Reference(s)
C-01	'341 Patent, claim 3	102 or 103	Acharya	
C-02	'341 Patent, claim 3	102 or 103	Azuma JP, or in the alternative Azuma JP in view of Acharya	
C-03	'341 Patent, claim 3	102 or 103	TiVo Streaming Products, or in the alternative TiVo Streaming Products in view of Acharya	
C-04	'341 Patent, claim 3	102 or 103	Wong	
C-05	'341 Patent, claim 3	102 or 103	Roku Streaming Products, or in the alternative Roku Streaming Products in view of Acharya	
C-06	'341 Patent, claim 3	102 or 103	Meade117; Kikuchi131; Sato746; Sato579; Sato168; Allport441; Chung964; Friedman997; Byun973; Yuasa898; Lin378; Maddali686; Baumgarten197; Yokozawa198; Kondo411	
C-103	'341 Patent, claim 3	103	As set forth in the chart	
D-01	'558 Patent, claims 1, 5, 6, 9, 13, 14	102 or 103	Horvitz, or in the alternative Horvitz in view of Ludvig, or in the alternative Horvitz in view of Ludvig and/or Yuanqing and/or Greer and/or Khoo	
D-02	'558 Patent, claims 1, 5, 6, 9, 13, 14	102 or 103	Ludvig, or in the alternative Ludvig in view of Yuanqing and/or Greer and/or Khoo	
D-03	'558 Patent, claims 1, 5, 6, 9, 13, 14	102 or 103	Osborne, or in the alternative Osborne in view of Ludvig, or in the alternative Osborne in view of Ludvig and/or Thyagaraja and/or Horvitz and/or Greer and/or Khoo	
D-04	'558 Patent, claims 1, 5, 6, 9, 13, 14	102 or 103	Yuanqing, or in the alternative Yuanqing in view of Ludvig, or in the alternative Yuanqing in view of Ludvig and/or Horvitz and/or Greer and/or Khoo	
D-05	'558 Patent, claims 1, 5, 6, 9, 13, 14	102 or 103	Thyagaraja, or in the alternative Thyagaraja in view of Ludvig, or in the alternative Thyagaraja in view of Ludvig and/or Horvitz and/or Yuanqing and/or Greer and/or Khoo	

Exhibit	Patent/claim		Invalidity Theory	Reference(s)
E-01	'020 Patent, claims 1-4, 21, 24, 28	102 or 103	Bennett, or in the alternative Bennett in view of Birger, or in the alternative Bennett in view of Birger and/or Nashida, or in the alternative Bennett in view of Seo, Nashida, and/or Birger.	
E-02	'020 Patent, claims 1-4, 21, 24, 28	102 or 103	Birger, or in the alternative Birger in view of Seo	
E-03	'020 Patent, claims 1-4, 21, 24, 28	102 or 103	Ekel, or in the alternative Ekel in view of Birger, or in the alternative Ekel in view of Birger and/or Seo, or in the alternative Ekel in view of Seo, Birger, Sato, and/or Rivas	
E-04	'020 Patent, claims 1-4, 21, 24, 28	102 or 103	Nashida, or in the alternative Nashida in view of Seo and Birger, or in the alternative Nashida in view of Seo, Birger, and/or Rivas	
E-05	'020 Patent, claims 1-4, 21, 24, 28	102 or 103	Sato, or in the alternative Sato in view of Seo, or in the alternative Sato in view of Seo, Strasser, Birger, and/or Rivas	
E-103	'020 Patent, claims 1-4, 21, 24, 28	103	As set forth in the chart	
F-01	'206 Patent, claims 1-5, 9-13, 16, and 17	102 or 103	Roku, including as implemented in Roku Streaming Device; U.S. Pub. No. 2004/0220926 filed Jun. 2, 2004; U.S. Patent 9,917,791 filed Sep. 26, 2014 issued Mar. 13, 2018; U.S. Pub. No. 2016/0044382 filed Dec. 11, 2014; CN 103176689 filed Dec. 28, 2011 issued Jan. 27, 2018	
F-02	'206 Patent, claims 1-5, 9-13, 16, and 17	102 or 103	TiVo Series 3/HD/XL; U.S. Pub. No. 2004/0220926 filed Jun. 2, 2004; U.S. Patent 9,917,791 filed Sep. 26, 2014 issued Mar. 13, 2018; U.S. Pub. No. 2016/0044382 filed Dec. 11, 2014; CN 103176689 filed Dec. 28, 2011 issued Jan. 27, 2018	
F-03	'206 Patent, claims 1-5, 9-13, 16, and 17	102 or 103	U.S. Pub. No. 2004/0220926 filed Jun. 2, 2004; U.S. Patent 9,917,791 filed Sep. 26, 2014 issued Mar. 13, 2018; U.S. Pub. No. 2016/0044382 filed Dec. 11, 2014; CN	

Exhibit	Patent/claim	Invalidity Theory	Reference(s)
			103176689 filed Dec. 28, 2011 issued Jan. 27, 2018; OpenMax™ IL Integration Layer Application Programming Interface Specification 1.1.2 published Sept. 1, 2008; Optimizing Intel Architecture Multimedia Applications by Software Tuning and Hardware Acceleration, Yuming Li, Software and Services Group, Intel Corporation, Intel Technology Journal, Volume 18, Issue 2, 2014
F-04	'206 Patent, claims 1-5, 9-13, 16, and 17	102 or 103	U.S. Patent 9,917,791 filed Sep. 26, 2014 issued Mar. 13, 2018; U.S. Pub. No. 2004/0220926 filed Jun. 2, 2004; U.S. Pub. No. 2016/0044382 filed Dec. 11, 2014; CN 103176689 filed Dec. 28, 2011 issued Jan. 27, 2018; OpenMax™ IL Integration Layer Application Programming Interface Specification 1.1.2 published Sept. 1, 2008; Optimizing Intel Architecture Multimedia Applications by Software Tuning and Hardware Acceleration, Yuming Li, Software and Services Group, Intel Corporation, Intel Technology Journal, Volume 18, Issue 2, 2014
F-05	'206 Patent, claims 1-5, 9-13, 16, and 17	102 or 103	Optimizing Intel Architecture Multimedia Applications by Software Tuning and Hardware Acceleration, Yuming Li, Software and Services Group, Intel Corporation, Intel Technology Journal, Volume 18, Issue 2, 2014; OpenMax™ IL Integration Layer Application Programming Interface Specification 1.1.2 published Sept. 1, 2008; U.S. Pub. No. 2004/0220926 filed Jun. 2, 2004; U.S. Patent 9,917,791 filed Sep. 26, 2014 issued Mar. 13, 2018; U.S. Pub. No. 2016/0044382 filed Dec. 11, 2014; CN 103176689 filed Dec. 28, 2011 issued Jan. 27, 2018
F-06	'206 Patent, claims 1-5, 9-13, 16, and 17	102 or 103	CN 103176689 filed Dec. 28, 2011 issued Jan. 27, 2018; U.S. Patent 9,917,791 filed Sep. 26, 2014 issued Mar. 13, 2018; U.S. Pub. No.

Exhibit	Patent/claim	Invalidity Theory	Reference(s)
			2004/0220926 filed Jun. 2, 2004; U.S. Pub. No. 2016/0044382 filed Dec. 11, 2014; U.S. Pub. No. 2014/0067770 filed Aug. 30, 2013
F-07	'206 Patent, claims 1-5, 9-13, 16, and 17	102 or 103	CN 105100915 filed Jun. 25, 2015 issued Mar. 16, 2019; U.S. Patent 9,917,791 filed Sep. 26, 2014 issued Mar. 13, 2018; U.S. Pub. No. 2004/0220926 filed Jun. 2, 2004; Optimizing Intel Architecture Multimedia Applications by Software Tuning and Hardware Acceleration, Yuming Li, Software and Services Group, Intel Corporation, Intel Technology Journal, Volume 18, Issue 2, 2014; Android OS
F-08	'206 Patent, claims 1-5, 9-13, 16, and 17	102	U.S. Pat. No. 10,263,912 (Goldfain)
F-09	'206 Patent, claims 1-5, 9-13, 16, and 17	102	U.S. Pat. No. 10,681,419 (Kim)
F-10	'206 Patent, claims 1-5, 9-13, 16, and 17	102	WO 2007/114643 (Lee)
F-11	'206 Patent, claims 1-5, 9-13, 16, and 17	102	U.S. Pat. No. 10,387,537 (Raeber)
F-12	'206 Patent, claims 1-5, 9-13, 16, and 17	103	U.S. Pat. No. 10,263,912 (Goldfain) in view of U.S. Pat. No. 10,681,419 (Kim)
F-13	'206 Patent, claims 1-5, 9-13, 16, and 17	103	U.S. Pat. No. 10,263,912 (Goldfain) in view of WO 2007/114643 (Lee)

Exhibit	Patent/claim		Invalidity Theory	Reference(s)
F-14	'206 Patent, claims 1-5, 9-13, 16, and 17	103		U.S. Pat. No. 10,681,419 (Kim) in view of WO 2007/114643 (Lee)
F-15	'206 Patent, claims 1-5, 9-13, 16, and 17	103		U.S. Pat. No. 10,263,912 (Goldfain) in view of in view of U.S. Pat. No. 10,387,537 (Raeber)
F-16	'206 Patent, claims 1-5, 9-13, 16, and 17	103		U.S. Pat. No. 10,681,419 (Kim) in view of U.S. Pat. No. 10,387,537 (Raeber)
F-17	'206 Patent, claims 1-5, 9-13, 16, and 17	103		WO 2007/114643 (Lee) in view of U.S. Pat. No. 10,387,537 (Raeber)
F-18	'206 Patent, claims 1-5, 9-13, 16, and 17	103		U.S. Pat. No. 10,263,912 (Goldfain) in view of U.S. Pat. No. 10,681,419 (Kim) and U.S. Pat. No. 10,387,537 (Raeber)

In addition to the invalidity and anticipation theories identified above, TCL identifies the following system art it will rely on to support its contention that the Asserted Patents are anticipated and/or obvious.

Asserted Patent	Third-Party	Products
'366 Patent	NEC	NEC AccuSync LCD71V
'366 Patent	Gateway	GTW-P42M203
'366 Patent	ViewSonic	ViewSonic VPW425
'366 Patent	RCA	RCA D52W19, RCA HD50LPW52

Asserted Patent	Third-Party	Products
'366 Patent	HP	HP L1755, HP Pavilion F1703
'366 Patent	Panasonic	Panasonic TH-42PX60U, Panasonic TH-42PA60L, Panasonic TH-50PHD6UY, Panasonic TH-50PX20UP, Panasonic TH-50PE77U, Panasonic TH-42PD50U
'780 Patent	Eastman Kodak Company	Kodak EasyShare Digital Picture Frame
'780 Patent	Roku	Roku PhotoBridge HD1000
'341 Patent	TiVo	TiVo Network DVR Products TiVo Mobile App
'341 Patent	Roku	Roku Streaming Devices and Roku Mobile App
'206 Patent	Roku	Roku Streaming Devices and TCL – Roku Televisions
'206 Patent	TiVo	TiVo Series 3/HD/XL

TCL further hereby incorporates by references the invalidity charts previously served against Maxell in prior litigations, including any that have yet to be served in this case.

Bates Number	Invalidity Contentions Exhibit No.
MAXELL_TCLEDTX_0012394	C-06
MAXELL_TCLEDTX_0016231	F-08

Bates Number	Invalidity Contentions Exhibit No.
MAXELL_TCLEDTX_0016310	F-09
MAXELL_TCLEDTX_0016374	F-10
MAXELL_TCLEDTX_0016445	F-11
MAXELL_TCLEDTX_0016522	F-12
MAXELL_TCLEDTX_0016531	F-13
MAXELL_TCLEDTX_0016540	F-14
MAXELL_TCLEDTX_0016549	F-15
MAXELL_TCLEDTX_0016558	F-16
MAXELL_TCLEDTX_0016567	F-17
MAXELL_TCLEDTX_0016576	F-18
MAXELL_TCLEDTX_0039208	A-08
MAXELL_TCLEDTX_0039652	A-09

TCL's theories of anticipation and/or obviousness reflected in the Exhibits do not prejudice or waive its ability to assert Section 112 defenses, described below, Section II.D, including during claim construction proceedings.

TCL reserves the right to supplement these Exhibits based upon new information learned during discovery. TCL also reserves the right to include new exhibits based upon the same.

C. Unpatentable Subject Matter – 35 U.S.C. § 101

TCL incorporates by reference its 12(b)(6) Motion for Partial Dismissal of Amended Complaint (Dkt. 37) and Reply In Support of 12(b)(6) Motion to Dismiss (Dkt. 69). Regarding the specific patents:

- 1. The '558 Patent is directed to a generic way of adjusting a notification's display duration and is ineligible for patenting under 35 U.S.C. § 101.**

The '558 Patent is directed to the abstract idea of *adjusting the display durations of television notifications according to a user's level of interest*. See, e.g., '558 Patent at Abstract. According to Maxell, and in view of the specification, the '558 Patent's claimed invention improves a user's experience with popup notifications because the user need not wait for certain notifications to disappear. Maxell contends that the '558 Patent "provid[es] a specific solution to receive and determine different types of notifications sent by a server that require different display durations and dynamically adjust the television and notification according to a user operation instruction." Compl., ¶ 120. But this solution amounts to no more than *adjusting the display durations of television notifications according to a user's level of interest*, which is an abstract idea and not a technological solution to a problem with the functioning of a computer. Finally, the '558 Patent claims' inclusion of generic technological elements only serve to perform the abstract idea on an internet-enabled television and do not transform the abstract idea into a patentable invention.

Alice Step One: "The first stage of the Alice inquiry looks at the focus of the claims, their character as a whole." *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018). When focusing on the character of claim 1 as a whole, it is apparent that claim 1 is directed to an abstract idea. Claim 1 recites four steps: (1) receiving a first notification; (2) determining a display duration for the first notification based on the notification type; (3) receiving an instruction from the user regarding the first notification; and (4) adjusting the first notification duration and all subsequent notifications of the same type's duration based on the user's instruction. '558 Patent, cl. 1. Similar to a psychologist determining a person's focus while reading various genres, the '558 Patent claims an abstract idea in the context of an internet-enabled television.

The Federal Circuit has held ineligible patents that change what is displayed to a user based on the user's preference. For example, in *Intellectual Ventures I LLC v. Capital One Bank (USA)*, the Federal Circuit held that claims reciting a system for providing web pages tailored to an individual user were directed to an abstract idea. 792 F.3d 1363, 1369 (Fed. Cir. 2015). The Federal Circuit has also held that "improving a user's experience while using a computer application is

not, without more, sufficient to render the claims directed to an improvement in computer functionality.” *Customedia Techs., LLC v. Dish Network Corp.*, 951 F.3d 1359, 1365 (Fed. Cir. 2020) (holding ineligible claims directed to the “abstract concept of targeted advertising”).

The ’558 Patent is not directed to a specific solution to a technological problem. Plaintiff advocates that the ’558 Patent solved problems with users needing to wait for certain notifications to disappear by “providing a specific solution to receive and determine different types of notifications sent by a server that require different display durations and dynamically adjust the television and notification according to a user operation instruction.” Compl., ¶ 120; *see also* ’558 Patent, 1:33–46 (explaining that “because notification times are “fixed” “according to an empiric value,” users must either “wait for the notification to disappear automatically[] or cancel display of the notification”). But users needing to wait for certain notifications to disappear is not a technological problem with the functioning of a computer, and adjusting the notification “according to a user operation instructions” is not a specific solution to a technological problem. *TLI Comm’cns*, 823 F.3d at 612. The ’558 Patent claims generalized steps for accomplishing the result of using a user’s tolerance to determine how long to display certain notifications, which is an abstract idea. *See Hawk Technology Sys., LLC v. Castle Retail.*, 60 F.4th 1349, 1357 (Fed. Cir. 2023) (holding that “receiving, displaying, converting, storing, and transmitting digital video ‘using result-based functional language’” was an abstract idea). *Id.* at 1357

Because claim 1 of the ’558 Patent is directed to an abstract idea, the analysis must proceed to *Alice* step 2.

Alice Step Two: Nothing in the claims, individually or as an ordered combination, transforms the nature of the claim into a patentable invention. The courts begin *Alice* step two by identifying those claim elements—if any—that are not abstract. *SAP Am.*, 898 F.3d at 1168–70.

Claim 1 adds a television and a server, both of which are generic devices performing their conventional functions. The television displays notifications and the server sends information. ’558 Patent, 5:17–19 (“displaying the program reminder notification on a television screen according to the first display duration); *Id.*, 5:9–10 (“receiving a program reminder notification

sent by a server”). Neither of these suffice to transform the abstract idea of *adjusting the display durations of television notifications according to a user’s level of interest* into a patentable invention. See *Virginia Innovation Sci. Inc. v. Amazon.com, Inc.*, 227 F. Supp. 3d 582, 595, 604 (E.D. Va. 2017) (finding ineligible claims where “the mobile network, the phone, the intermediary device, and the display monitor all perform their conventional functions” and “the process for ‘converting’ and ‘compressing’ signals is described in purely functional terms, without any algorithm or code for achieving those results”).

Finally, by characterizing the ’558 Patent’s advance over the prior art as “a specific solution to receive and determine different types of notifications sent by a server that require different display durations and dynamically adjust the television and notification according to a user operation instruction,” Compl., ¶ 120, Maxell confirms the ’558 Patent does not contain a patentable inventive concept. See *Trading Techs. Int’l v. IBG LLC*, 921 F.3d 1378, 1385 (Fed. Cir. 2019) (“The abstract idea itself cannot supply the inventive concept, ‘no matter how groundbreaking the advance.’”). The ’558 Patent’s alleged inventive solution is simply the abstract idea of *adjusting the display durations of television notifications according to a user’s level of interest*.

The ’558 Patent includes 17 claims, two of which are independent: claims 1 and 9. Claim 1 is directed to a method; whereas claim 9 is directed to a device. However, there is no substantive difference between claims 1 and 9, beyond claim’s 9’s further recitation of generic elements, memory and processor. Accordingly, claim 1’s discussion above is representative of the same for claim 9. The dependent claims, claims 2–8 and 10–17, are also ineligible under 35 U.S.C. § 101. Each simply refines the abstract idea by adding further generic, and result-oriented steps for controlling the duration of the notification display and are, thus, for the same reasons, ineligible under 35 U.S.C. § 101. *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*, 776 F.3d 1343, 1348 (Fed. Cir. 2014) (addressing each claim of the asserted patents is “unnecessary” if “the claims are “substantially similar and linked to the same abstract idea”).

2. The ’020 Patent is directed to a generic way to change video content on

a display and is ineligible for patenting under 35 U.S.C. § 101.

The '020 Patent claims are directed to the abstract idea of *changing video content on a display by retrieving a new video using an identifier and playing it*. Maxell advocates that the '020 Patent's advancement over the prior art is "an improved information processing apparatus ... with specific means of controlling the display ... of a display device according to distinct action-triggering information acquired and received from a mobile terminal," in other words "by passing a URL of target video content, login authentication information, Cookie information, or the position of a scroll bar or pointer." Compl., ¶ 142. But this amounts to nothing beyond controlling what is displayed by sending a URL from a mobile device to an internet-enabled television. This generic functionality is purely abstract, and the '020 Patent includes no claim elements, individually or collectively, that transform the claims into a patentable invention.

Alice Step One: As explained with regard to the '558 Patent, the first step of *Alice* focuses on the character of the claims as a whole. *SAP Am.*, 898 F.3d at 1167. Claim 1—the only independent claim of the '020 Patent—when characterized as a whole, is directed to an abstract idea. Claim 1 recites the following steps: receive a first video content via the received broadcast signal; acquire the second video content via the internet using said identifier; display the second video content; terminate display of the first video content prior to display of the second video content; execute operation instructions received from [an] external mobile terminal; and execute commands received from the remote controller. Taken as a whole, the claims amount to the steps of: (1) playing a first video content; (2) retrieving second video content using an identifier; (3) terminating the playing of the first video content; (4) playing the second video content; and (5) executing operation instructions and commands. Similar to a patron asking a librarian to locate a book (or a video) by title (or by card catalogue number) and then putting down the book they were reading upon the librarian's return, the '020 Patent claims a *broad and familiar concept* that has been performed since books were in print and VHSes sat on shelves. *See Affinity Labs of Tex., LLC v. DIRECTTV, LLC*, 838 F.3d 1253, 1255–56, 58 (Fed. Cir. 2016) (holding patent-ineligible

“a broad and familiar concept concerning information distribution that [wa]s untethered to any specific or concrete way of implement[ation]”).

The '020 Patent is not directed to a specific solution to a technological problem with the functioning of a computer but “on a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016). The '020 Patent does not in, any way, improve the way television, mobile devices, or the internet operate; instead, it merely relies on these components to perform generalized steps for communicating identification information, displaying video, and performing unspecified commands. *See In re TLI*, 823 F.3d at 612 (contrasting “generalized steps to be performed on a computer using conventional computer activity” from “claims ‘directed to an improvement in the functioning of a computer’”). Maxell suggests that the '020 Patent invented an “an improved information processing apparatus ... with specific means of controlling the display ... of a display device.” Yet, at the same time, Maxell recognizes that those “specific means” amount to no more than communicating “action-triggering information acquired and received from a mobile terminal.” Compl., ¶ 142; *see also* '020 Patent, 3:40–47, 7:1–10, Fig. 4 (describing controlling the display of content through identification information and commands triggered by a user pressing of a button). Communicating action-triggering information is part of the abstract idea and does not constitute an improvement to the functioning of the display device.

The Federal Circuit has held ineligible claims reciting steps involving communicating information between a mobile device and television and thereby displaying the information on the display. For example, in *Free Stream Media Corp. v. Alphonso Inc.*, the Federal Circuit found ineligible claims directed to “systems and methods for addressing barriers to certain types of information exchange between various technological devices, e.g., a television and a smartphone or tablet being used in the same place at the same time.” 996 F.3d 1355, 1361 (Fed. Cir. 2021). Rejecting plaintiff’s argument that the claim was directed to “a specific improvement in computer capabilities, namely ‘television and mobile devices that operate with respect to each other differently from conventional televisions and mobile devices,’” the Federal Circuit determined that

any purported improvement described in the patent’s specification was absent from the claims and concluded that the alleged claimed technological improvement simply “implement[ed] a computer to achieve the abstract idea of providing targeting advertising to [a] mobile device user.” *Id.* Just like the patent at issue in *Free Stream Media*, the ’020 Patent simply exchanges information among devices to display content and does not improve the involved devices nor the communication channels between them.

The Federal Circuit has also held claims involving broadcast systems ineligible. In *Affinity Labs*, the Federal Circuit affirmed the Western District of Texas’s patent ineligibility decision and held abstract and ineligible a claim directed to “[a] broadcast system” for “providing out-of-region access to regional broadcast content” because it claimed “a broad and familiar concept concerning information distribution that [wa]s untethered to any specific or concrete way of implement[ation].” *Affinity Labs*, 838 F.3d at 1255–56, 58. Like the claims in *Affinity Labs*, claim 1 includes multiple generic components (such as a “signal separator,” “video processor,” and “audio proecssor”) which—like the cellphone in *Affinity Labs*—exist to “confine the abstract idea to a particular technological environment.” *Id.* at 1258–59.

Alice Step Two: Much like the ’558 Patent discussed above, the claims of the ’020 Patent fail to include any elements that individually, or as an ordered combination, transform the abstract idea into a patent-eligible invention. Instead, Claim 1 reads like a laundry list of generic components performing their conventional operations.

Claim 1 adds the additional elements: display apparatus, internet, digital broadcast receiver, signal separator, video processor, audio processor, network communication module, radio receiver, infra-red (IR) receiver, display panel, system controller, and mobile terminal. But each exists only to perform its generic operation—as recited in claim 1 and as described in the specification:

- The display apparatus “displays an image on the display panel.” *Id.*, cl. 1, 5:51–52.
- The internet “represents a set of Web servers.” *Id.*, cl. 1, 4:59–60.
- The digital broadacast receiver “receives desired broadcast data.” *Id.* cl. 1, 5:14.

- The signal separator “conduct[s] demultiplexing of a signal.” *Id.* cl. 1, 5:19–20.
- The video processor “converts [] data into data to be processed by the display unit.” *Id.* cl. 1, 5:45–46.
- The audio processor “converts digital audio data ... into analog audio data.” *Id.* cl. 1, 5:35–36.
- The network communication module “communicates predetermined data with the internet.” *Id.* cl. 1, 5:61–62.
- The radio receiver “conducts radio communication with ... the mobile terminal.” *Id.* cl. 1, 6:16–17.
- The IR receiver “communicates data using an infrared-ray signal.” *Id.* cl. 1, 13:52–53.
- The system controller merely “control[s] the display apparatus” to perform the steps of the abstract idea. *Id.* cl. 1, 20:47–48.

None of these components perform anything beyond their routine and conventional functions and, thus, do not transform the abstract idea into a patentable invention. *See Virginia Innovation. Sci. Inc.*, 227 F. Supp. 3d at 595, 604 (finding ineligible claims where “the mobile network, the phone, the intermediary device, and the display monitor all perform their conventional functions” and “the process for ‘converting’ and ‘compressing’ signals is described in purely functional terms, without any algorithm or code for achieving those results”).

Finally, by characterizing the advance over the art as an “improved video relay system” capable of sending “distinct action-triggering information acquired ... from a mobile terminal,” Compl., ¶ 142, Maxell confirms that ’020 Patent’s alleged advance over the prior art is simply the abstract idea of communicating information and commands. *See Trading Techs.*, 921 F.3d at 1385

(“The abstract idea itself cannot supply the inventive concept, ‘no matter how groundbreaking the advance.’”).

Claim 1 is the only independent claim, and none of the remaining dependent claims (Claims 2 through 30) add anything beyond the inclusion of generic steps or elements. For the reasons above, including the authorities cited in their support, all are ineligible under section 101. *Content Extraction & Transmission LLC*, 776 F.3d at 1348.

3. The '341 Patent is directed to a generic way to change video content on a display and is ineligible for patenting under 35 U.S.C. § 101.

The '341 Patent is very similar to the '020 Patent. Like the '020 Patent, the '341 Patent recites steps for communicating information between a television and mobile devices to control displaying content on the television's display. The only real difference between the two is that the '341 Patent contemplates multiple mobile devices seeking to control what is displayed and, accordingly, adds a step for the television to send a termination message to a first device when a second device takes over control. But in accord with other patents directed to an abstract idea, this is no more than an additional generalized step. Thus, for much of the same reasons as for the '020 Patent, the '341 Patent is ineligible under 35 U.S.C. § 101.

The '341 Patent's claims are directed to the abstract idea of *changing the video content playing on a display device*. Maxell advocates that the '341 Patent improved the prior art because “viewing of content from different wireless devices was not possible using casting using a seamless and user-friendly video display apparatus, and without user interaction.” Compl., ¶ 98. But the purported improvement amounts to no more than generalized steps performed with generic hardware.

Alice Step One: Focusing on the character of Claim 1 as a whole, it is apparent that it is directed to an abstract idea. The gist of Claim 1 is (1) receiving from a new mobile device a command to change to a new video content; (2) terminating display of the original video content; (3) starting display of the new video content; and (4) communicating a message to the original

mobile device that display of the original video content has been terminated. Receiving commands to change video content, changing video content, and communicating to other devices about the change are all generalized steps performed on a computer (*e.g.*, controller). *See In re TLI*, 823 F.3d at 612. Similar to a switchboard operator connecting and disconnecting calls and informing the caller of the same, Claim 1 claims a broad and familiar concept in the context of an internet-enabled television. *See Affinity Labs*, 838 F.3d at 1258. And Claim 1 generically recites the results of these steps, rather than claiming any specific means by which these steps are performed. *See In re TLI*, 823 F.3d at 612.

Like the '020 Patent, the '341 Patent is not directed to a specific solution to a technological problem. The specification indicates that the '341 Patent is directed to assisting different users with mobile devices to each be able to control the content displayed on the television. '341 Patent, 2:16–33. But the claimed solution is not tied to the functionality of the television, the mobile device, or the connection between them. *See In re TLI*, 823 F.3d at 612. Plaintiff alleges that the '341 Patent solved the problem that it was not possible to “view[] ... content from different wireless devices ... [,] using casting using a seamless and user-friendly video display apparatus, ... without user interaction” though “including *specific means of operation and communication* between two different wireless devices.” Compl., ¶ 98 (emphasis added). Tellingly, however, Plaintiff never describes what these “specific means of operation and communication” are.

Like the '020 Patent, the Federal Circuit’s decisions in *Free Stream Media*, *Affinity Labs*, and *TLI Communications* are instructive. The '341 Patent simply exchanges information amongst devices to display content and does not improve the involved devices nor the communication channels between them. The '341 Patent is directed to an abstract idea, and the analysis must proceed to *Alice* step two.

Alice Step Two: The '341 Patent fails to include any elements that individually or as an ordered combination transform the abstract idea into a patent-eligible invention. The '341 Patent adds the generic elements: a display unit, a communication unit, wireless control devices, an infrared receiver unit, and a controller. '341 Patent, cl. 1. But, just like the '020 Patent, these

generic compents each perform their generic operations. *See Virginia Innovation Sci. Inc.*, 227 F. Supp. 3d at 595.

- The display unit “displays ... video content.” *Id.*
- The communication unit “executes two types of bidirectional wireless communications.” *Id.*
- The wireless control devices send the “command for changing a video content on the display unit from [one] video content ... to another video content.” *Id.*
- The infrared receiver unit “receives infrared rays.” *Id.*
- The controller “controls the display unit, the communication unit, and the infrared receiver unit.” *Id.*

These claim elements, even in view of the specification, fail to capture any inventive concept beyond the abstract idea itself. *See generally*, ’341 Patent, 4:56–6:51. Again, Plaintiff contends that the inventive concept is “***specific means of operation and communication*** between two different wireless devices,” Compl., ¶ 98 (emphasis added), but these *specific means* amount to no more than communicating various information and executing generalized commands. Indeed, the entire specification is essentially no less than 14 embodiments, eaching describing a minor variation of the same abstract idea. *See generally* ’341 Patent, 4:37–26:12 (first through fourteenth embodiments).

The ’341 Patent includes only four claims, each independent. Claim 1, however, is representative of them all. Claim 2 is nearly identical to Claim 1, except that it is directed to a method. The only difference between Claim 1 and Claim 3 is semantic—instead of reciting “the display unit terminates displaying the [first/second] video content and starts playing the [second/another] video content,” as in Claim 1, Claim 3 recites that “the display unit terminates displaying the [first/second] video content ***for changing a content to be displayed from the [first/second] video content to another*** video content” (emphasis added). Finally, Claim 4 is the

same as Claim 3, except that it is directed to a method. Accordingly, all are ineligible under section 101 for the same reasons. *Content Extraction & Transmission LLC*, 776 F.3d at 1348.

4. The '780 Patent is directed to a generic method for displaying images as a slideshow and is ineligible for patenting under 35 U.S.C. § 101.

The '780 Patent claims are directed to the abstract idea of *receiving compressed images and displaying them as a slideshow*. According to Plaintiff, the '780 Patent's improvement over the prior art is the "unconventional use of a first signal, a second signal, and a predetermined time interval, to conduct and display a slide show." Compl., ¶ 79. However, using a first signal, a second signal, and a predetermined time period, either individually or as an ordered combination, constitute an abstract idea.

Alice Step One: Focusing on the character of Claim 1 as a whole, the claim is directed to an abstract idea. Claim 1 recites the steps of (1) sending a message requesting compressed image information; (2) receiving compressed image information corresponding to still images; (3) decoding the compressed image information; and (4) displaying a slide show. As with the other patents discussed above, sending a request for information, receiving information, and decoding and thereby displaying the information are generalized steps performed on generic display components. *See In re TLI*, 823 F.3d at 612 (quoting *Enfish*, 822 F.3d at 1335). Moreover, the '780 Patent generically claims the results of these steps, rather than claiming any specific means by which these steps are performed. Similar to a human operator receiving photographic slides, loading them into a slide carousel according to information about which end is the top of the image, and playing the carousel to project the images according to a set duration, Claim 1 claims a broad and familiar concept and simply performs it in the context of modern technology (that is, using USB, LAN, JPEG, computer control, and so on).

Again, just like the invention at issue in *TLI Communications*, which "sought to 'provid[e] for recording, administration and archiving of digital images [between a cell phone and server] simply, fast and in such way that the information therefore may be easily tracked,'" the '780 Patent

does not provide a particular solution to a technological problem. Maxell asserts that the '780 Patent solves problems related to communicating compressed images between a camera and display device in ways that depend on whether the images are sent via USB circuitry or LAN, but Maxell's purported solution is not a specific solution to a technological problem. Compl., ¶¶ 78–79. “A first signal, a second signal, and a predetermined time interval” are part of the abstract idea, and do not amount to an improvement to the camera, the television, the USB or LAN channels between them, or the techniques used for image compression. *See In re TLI*, 823 F.3d at 611–63 (“[T]he claims here are not directed to a specific improvement to computer functionality. Rather, they are directed to the use of conventional or generic technology in a nascent but well-known environment, without any claim that the invention reflects an inventive solution to any problem presented by combining the two.”).

Hawk Technology Sys., LLC v. Castle Retail, is instructive here. There, the Federal Circuit held that “receiving, displaying, converting, storing, and transmitting digital video ‘using result-based functional language’” was an abstract idea. 60 F.4th 1349, 1357 (Fed. Cir. 2023) (quoting *Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1337 (Fed. Cir. 2017)). Similarly, the Federal Circuit in *Adaptive Streaming Inc. v. Netflix, Inc.* held that “encoding and decoding image data and ... converting formats, including when data is received from one medium and sent along through another, are by themselves abstract ideas.” 836 F.App’x 900, 903 (Fed. Cir. 2020). Then as now, claiming a familiar way to communicate and display content, even as a slide show, is a bare abstract idea.

Alice Step Two: The claims fail to include any elements that individually or as an ordered combination transform the abstract idea into a patent-eligible invention. The claims include the additional elements: Universal Serial Bus (USB) interface circuitry, wireless LAN interface circuitry, a decoder, and a display screen. '780 Patent, cl. 1. However, each of these elements exists to perform its generic native functionality.

- The USB interface circuitry “receive[s] ... image information ... over a USB cable.”

Id., cl. 1, 4:53–67.

- The wireless LAN interface circuitry “wirelessly receive[s] ... image information ... over a network.” *Id.*, cl. 1, 4:53–67.
- The docoder “decode[s] ... compressed ... image information.” *Id.*, cl. 1, 4:53–67.
- The display screen displays images. *Id.*, cl. 1, 4:53–67.

“Simply stated, “[n]othing in the claims, understood in light of the specification, requires anything other than off-the-shelf, conventional computer, network, and display technology for gathering, sending, and presenting.”” *Hawk Technology*, 60 F.4th at 1349 (Fed. Cir. 2023).

Maxell alleges that inventive concept is the “unconventional use of a first signal, a second signal, and a predetermined time interval.” Compl., ¶ 79. But this alleged inventive concept does not improve the actual communication channels, USB or LAN, or the compression methodologies. *See, e.g.*, ’341 Patent, 4:63–64 (describing a conventional “compression system such as, for example, MPEG 2, MPEG 4 or AVC/H.264 for the moving picture ... [and] JPEG for the still picture”), 6:57–60 (“[t]he image apparatus 100 ... has the mobile telephone function and the radio LAN (Local Area Network) function”). It—at best—performs the abstract idea through them. *Id.*, 16:34–39 (the device “selects any one of the still picture[s] inputted to the HDMI terminal 1005 and the still picture inputted to the USB terminal or LAN terminal 1014 to be supplied to the HD display”). No matter how unconventional, the abstract idea itself cannot constitute the inventive concept. *Trading Techs.*, 921 F.3d 1385 (quoting in part *SAP Am., Inc.*, 898 F.3d at 1167) (“The abstract idea itself cannot supply the inventive concept, ‘no matter how groundbreaking the advance.’”).

The ’780 Patent includes 20 claims. Claims 1, 15, and 20 are representative of the other claims. Claims 15 and 20 additionally include the step of the “resizing processor resiz[ing] still pictures by changing a number of pixels.” But like the other limitations, this step is generic and result oriented, which the specification confirms by not describing any details beyond the result of the step as claimed. *See*, ’708 Patent, 15:64–5. This step does not add a specific technological solution to a technological problem, and its inclusion does not transform the nature of the claim

into a patentable invention. Rather, it is simply an additional generic step for displaying the compressed images. The rest of the dependent claims simply add generic features or functionality that do not transform the nature of the independent claims into a patentable invention. Accordingly, the claims of the '708 Patent are ineligible under 35 U.S.C. § 101.

5. The '206 Patent is directed to a generic method of displaying an intermediate interface while transitioning between AV applications and is ineligible for patenting under 35 U.S.C. § 101.

The '206 Patent claims are directed to the abstract idea of *displaying an intermediate interface while the television transitions between audio video applications*. Like the curtain drop that shields the audience's view from the chaos of stage hands clearing and resetting the stage for next scene of a play, the '206 patent claims a mental process, simply in the context of televisions. *See Yu v. Apple Inc.*, 1 F.4th 1040, 1043 (Fed. Cir. 2021).

Alice Step 1: The claims are directed to the abstract idea of *displaying an intermediate interface while transitioning between audio video applications*. Claim 1 for example recites the following steps: (1) receiving an instruction to switch AV applications; (2) starting an intermediate interface; (3) placing the currently running AV application to the background; (4) triggering, in response to the intermediate interface being completely loaded, the background application to release the decoder; (5) instructing the target AV application to load. Essentially, the '206 patent claims displaying an intermediate interface while the AV applications are switched to the target application, which like dropping a curtain during a play is something humans have done mentally for centuries. *See EMG Technology, LLC v. Etsy, Inc.*, Case No. 6:16-CV-00484-RWS-JDL, 2017 WL 6261810 *5-7 (E.D. Tex. Jan. 25, 2017) (holding ineligible a patent directed to displaying to a user a menu for easier navigation through the internet where the menu and its functionality were performed on generic computer components).

The '206 Patent is not directed to a specific solution to a technological problem with the functioning of a computer but “on a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir.

2016). The '206 Patent does not in, any way, improve the way television or the internet operate; instead, it merely relies on these components to perform generalized steps for communicating identification information, displaying video, and performing unspecified commands. *See In re TLI*, 823 F.3d at 612 (contrasting “generalized steps to be performed on a computer using conventional computer activity” from “claims ‘directed to an improvement in the functioning of a computer’”).

Alice Step 2: The claims of the '206 patent do not transform the nature of the claim into a patent eligible concept. In addition to the abstract idea, the '206 patent recites the additional element “AV decoder” and claims steps for setting AV applications to the background, releasing the AV decoder, and executing playback instructions. But each of these components and functions were, at the time of the '206 patent’s filing, well-understood, routine, and conventional activities that were carried out on a smart television. For example, the '206 patent mentions Android OS, which at the time of the '206 patent was well known to include limited resources, including a streaming buffer and a single AV decoder which routinely switched between AV applications by setting programs to the background. *See, e.g.,* '206 patent, 1:34-46, 2:63-67. The '206 patent does not present anything above the well-known operating systems available at the time the '206 patent was filed. At best, the '206 patent additionally included an interface, but as discussed with respect to *Alice Step 1*, displaying the interface is the abstract idea. Accordingly, the '206 patent does not include any additional elements that transform the nature of the claim into a patent-eligible invention.

D. Invalidity Under 35 U.S.C. § 112

1. Lack of written description and/or enablement

35 U.S.C. § 112(a) (pre-AIA § 112, ¶ 1) requires that the specification contain a written description of the invention. “[T]he hallmark of written description is disclosure.” *Boston Scientific Corp. v. Johnson & Johnson*, 647 F.3d 1353, 1361–62 (Fed. Cir. 2011) (citation omitted). The test for whether a specification adequately describes an invention is “whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date [T]he test requires

an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art [It] is a question of fact.” *Ariad Pharms., Inc. v. Eli Lilly and Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc); *Boston Scientific*, 647 F.3d at 1362.

The enablement requirement of § 112 demands that the patent specification enable “those skilled in the art to make and use the full scope of the claimed invention without ‘undue experimentation.’” *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1365 (Fed. Cir. 1997) (quoting *In re Wright*, 999 F.2d 1557, 1561 (Fed. Cir. 1993)). “[T]he scope of the claims must be less than or equal to the scope of the enablement.” *Nat’l Recovery Tech., Inc. v. Magnetic Separation Sys., Inc.*, 166 F.3d 1190, 1196 (Fed. Cir. 1999). In other words, the claims must be enabled over their entire claimed range. *See id.* (finding lack of enablement because the “claim [] [was] broader than the enablement as taught in the specification”). The broader a patentee claims, the more it must enable—“If a patent claims an entire class of processes, machines, manufactures, or compositions of matter, the patent’s specification must enable a person skilled in the art to make and use the entire class.” *Amgen Inc. v. Sanofi*, 143 S. Ct. 1243, 1254 (2023).

TCL contends that the following Asserted Claims are invalid under pre-AIA 35 U.S.C. § 112, ¶ 1 or AIA 35 U.S.C. § 112(a). Each Asserted Claim identified below (and each Asserted Claim that depends therefrom) is invalid because the specification of the Asserted Patents fail to provide a sufficient written description, enabling disclosure. For each listed term or phrase, TCL believes the term or phrase is invalid under pre-AIA § 112, ¶ 1 or AIA § 112(a), as is any limitation including such terms or phrases, for the same reason(s).

TCL further contends that no dependent claims remedy the lack of written description and/or enablement found in the independent claims. As a result, all dependent claims depending from an independent claim lacking written description and/or enablement are invalid for the same reasons.

U.S. Patent No. 10,375,341

- Claim 3: “communication unit.” The specification does not adequately enable the functions of “communication unit” as a term requiring 112(f) treatment.

- Claim 3: “wherein, if a first command for changing a video content on the display unit from a first video content selected by the first wireless control device to another video content is transmitted from the second wireless control device to the communication unit via the router during the first video content is displayed on the display unit, the display unit terminates displaying the first video content for changing a content to be displayed from the first video content to another video content and the communication unit sends first information for informing termination of the displaying of the first video content to the first wireless control device without going via a router.” The specification fails to describe the claimed sequence of communications between the display apparatus and wireless control devices. It is also not disclosed in the specification how the disclosed system makes a determination about what channel the first communication came in through and then decides to send the termination message through a different channel.
- Claim 3: “wherein, if a second command for changing a video content on the display unit from a second video content selected by the second wireless control device to another video content is transmitted from the third wireless control device to the infrared receiver unit by infrared rays during the second video content is displayed on the display unit, the display unit terminates displaying the second video content is displayed on the display unit, the display unit terminates displaying the second video content for changing a content to be displayed from the second video content to another video content and the communication unit sends second information for informing termination of the displaying of the second video content via the router to the second wireless control device.” The specification fails to describe the claimed sequence of communications between the display apparatus and wireless control devices. It is also not disclosed in the specification how the disclosed system makes a determination about what channel the first

communication came in through and then decides to send the termination message through a different channel.

- Claim 3: the specification does not describe to a POSITA the steps and contents of “information for informing termination of the displaying of the second video content.”

U.S. Patent No. 10,015,558

- Claim 1, 9: “determin[e/ing] a first display duration corresponding to a notification type.” The specification fails to describe the process by which the method is to determine a first display duration and how said display duration is associated with a notification type.

U.S. Patent No. 10,219,020

- Claim 1: “display the [first/second] video content on the display panel”
- Claim 1: “acquire ... video content via the interne [sic] using said identifier.” The specification fails to provide sufficient description of this limitation to demonstrate that the inventor had possession of the invention being claimed at the time the patent application was filed. The specification also fails to disclose how the video content is acquired by the display apparatus via the identifier.
- Claim 1: “terminate display of the first video content prior to display of the second video content.” The specification fails to describe the claimed sequence of actions conducted by the display apparatus.
- Claim 1: “execute operation instructions ... while the second video content is being displayed.” The specification fails to provide sufficient description of this limitation to demonstrate that the inventor had possession of the invention being claimed at the time the patent application was filed (e.g., the word “operation instructions” does not even appear in the specification). Moreover, the specification does not fully enable the broad scope of the term “execute operation instructions.”

- Claim 1: “execute commands received from the remote controller.” The specification does not fully enable the broad scope of the term “execute commands.”
- Claim 2: “wherein the second video content comprises video content displayed on the external mobile terminal.” The specification does not enable a POSITA to display video content on the display device where the content is displayed on the external mobile terminal.
- Claim 3: “receive display state information for the second video content.”
- Claim 4: “display state information comprises position information.” The specification fails to provide sufficient description of this limitation to demonstrate that the inventor had possession of the invention being claimed at the time the patent application was filed (e.g., the word “position information” does not even appear in the specification in relation to display video content acquired from the Internet).

U.S. Patent No. 10,321,206

- Claim 1: “triggering, in response to the intermediate interface has been completely loaded, the AV application, which has been set to be the background program, to release an AV decoder.” It is not disclosed in the specification how: (1) it is determined that the intermediate interface has been completely loaded and (2) how the intermediate interface can be completely loaded before the first AV application releases the AV decoder,” when the claim further requires that the intermediate interface occupy some resources—“wherein the resource occupied by the intermediate interface [is] less than the resource occupied by the target AV application.”

2. Indefiniteness

Claims are indefinite under 35 U.S.C. § 112(b) (pre-AIA § 112, ¶ 2) when they “fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.”

Nautilus, Inc. v. Biosig Instruments, Inc., 134 S. Ct. 2120, 2124 (2014). For example, to the extent an asserted apparatus claim includes both apparatus and method limitations, that claim is invalid for indefiniteness under pre-AIA § 112, ¶ 2 or AIA § 112(b) because it fails to identify or notify the public of what constitutes direct infringement. *See IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377 (Fed. Cir. 2005). Similarly, a claim that uses means-plus function claiming is indefinite “[i]f the patentee fails to disclose adequate corresponding structure.” *Williamson v. Citrix Online, LLC*, 792 F. 3d 1339, 1352 (Fed. Cir. 2015). A claim can also be found indefinite if it uses terms of degree. *See Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014). As the Federal Circuit has “explained, a term of degree fails to provide sufficient notice of its scope if it depends ‘on the unpredictable vagaries of any one person’s opinion.’” *Id.* (citation omitted). In addition, “a claim term that lacks an antecedent basis may ... render a claim indefinite.” *In re Downing*, 754 F. App’x 988, 996 (Fed. Cir. 2018).

TCL contends that the following Asserted Claims are invalid under pre-AIA § 112, ¶ 2 or AIA § 112(b). TCL also incorporate the parties’ claim construction exchanges and subsequent briefing. Each Asserted Claim identified below (and each Asserted Claim that depends therefrom) is invalid under pre-AIA § 112, ¶ 2 or AIA § 112(b) because they fail to inform, with reasonable certainty, those skilled in the art about the scope of the claimed invention. For each listed term or phrase, TCL contends the term or phrase is invalid under pre-AIA § 112, ¶ 2 or AIA § 112(b), and any limitation including such term or phrase is also indefinite.

TCL further contends that no dependent claims remedy the indefiniteness found in the independent claims. As a result, all dependent claims depending from an indefinite independent claim are invalid for the same reasons.

U.S. Patent No. 7,924,366

- Claims 5, 9: “provided on a mounting surface”

U.S. Patent No. 10,650,780

- Claim 1: “image information”

- Claim 1: “displays a slide show ... based on the decoded [first/second] image information”

U.S. Patent No. 10,015,558

- Claim 1, 9: “notification information”
- Claim 1, 5, 6: “second notification information independently received from the server”

U.S. Patent No. 10,321,206

- Claims 1, 9: “completely loaded”
- Claims 1, 9: “the intermediate interface does not utilize the AV decoder, and/or the intermediate interface contains less interface content than the target AV application.”
- Claims 1, 9: “a resource”
- Claim 1, 9: “less content”

IV. DOCUMENT PRODUCTION ACCOMPANYING INVALIDITY CONTENTIONS

TCL provides production volumes 3-4 with these contentions served on May 31st, 2024, and incorporates those productions by reference. This production includes the materials required by Patent L.R. 3-4.

Dated: May 31, 2024

Respectfully submitted,

/s/ Stephen E. Baskin.....

STEPHEN E. BASKIN (D.C. BAR No. 456015)

sbaskin@kslaw.com

DARA M. KURLANCHEEK (D.C. BAR No. 1020381)

dkurlancheek@kslaw.com

PATRICK M. LAFFERTY (*PRO HAC VICE*

FORTHCOMING)

Plafferty@kslaw.com

ZACHARY COOTS (*PRO HAC VICE FORTHCOMING*)

zcoots@kslaw.com

KING & SPALDING LLP

1700 Pennsylvania Avenue, NW

Suite 1900

Washington, DC 20006

Telephone: (202) 737-0500

Telecopier: (202) 626-3737

LEE YEAKEL (TEXAS BAR No. 22148000)

lyeakel@kslaw.com

MATTHEW WOOD (TEXAS BAR No. 24110548)

mwood@kslaw.com

KING & SPALDING LLP

500 W. 2nd Street, Suite 1800

Austin, Texas 78701

Telephone: (512) 893-4562

Telecopier: (512) 893-4565

JENNIFER H. DOAN (TEXAS BAR No. 08809050)

jdoan@haltomdoan.com

HALTOM & DOAN

6500 Summerhill Road, Suite 100

Texarkana, TX 75503

Telephone: (903) 255-1000

Telecopier: (903) 255-0800

Counsel for Defendants, TCL Electronics Holdings Ltd. (f/k/a TCL Multimedia Technology Holdings, Ltd.); TCL Industries Holdings Co., Ltd.; T.C.L. Industries Holdings (H.K.) Limited; TTE Corporation; TCL King Electrical Appliances (Huizhou) Co. Ltd.; Manufacturas Avanzadas S.A. de C.V.; TCL Smart Device (Vietnam) Co., Ltd.; Shenzhen TCL New Technology Co., Ltd.; TCL Optoelectronics Technology (Huizhou) Co., Ltd.; TCL Overseas Marketing Ltd.; and TCL

Technology Group Corporation (f/k/a TCL Corp.)

Ashley L. Kirk (TX Bar No. 24067263)

akirk@willenken.com

Paul Loh (*admitted pro hac vice*)

(CA Bar No. 160541)

ploh@willenken.com

Michelle K. Millard (*admitted pro hac vice*)

(CA Bar No. 298245)

mmillard@willenken.com

WILLENKEN LLP

707 Wilshire Blvd., Suite 3850

Los Angeles, California 90017

Telephone: (213) 955-9240

Facsimile: (213) 955-9250

*Counsel for Defendants, TCL Moka International
Limited; TCL Moka Manufacturing S.A. de C.V.*

CERTIFICATE OF SERVICE

I hereby that on May 31, 2024 the foregoing document was electronically transmitted via email or electronic service upon all counsel of record in this matter.

/s/ Stephen E. Baskin

Stephen E. Baskin