IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

ADVANCED CODING TECHNOLOGIES, LLC, Plaintiff, v. LG ELECTRONICS INC. and LG ELECTRONICS U.S.A., INC., Defendants.	§ § § § § § § § § § § § § §	Case No. 2:22-cv-00501-JRG (LEAD CASE) **JURY TRIAL DEMANDED**
ADVANCED CODING TECHNOLOGIES, LLC, Plaintiff, v. SAMSUNG ELECTRONICS CO., LTD. and SAMSUNG ELECTRONICS AMERICA, INC., Defendants.	§ § § § § § § § § § § § § §	Case No. 2:22-cv-00499-JRG (MEMBER CASE) **JURY TRIAL DEMANDED**

JOINT CLAIM CONSTRUCTION AND PREHEARING STATEMENT

In accordance with Patent Local Rule 4-3, Plaintiff Advanced Coding Technologies, LLC ("ACT"), Defendants LG Electronics Inc. and LG Electronics U.S.A., Inc. (collectively, "LG"), and Defendants Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (collectively, "Samsung") jointly submit this Joint Claim Construction and Prehearing Statement setting for the parties' proposed constructions for the herein identified terms, phrases, or clauses of United States Patent No. 6,845,128 (the "'128 Patent"), United States Patent No. 8,090,025 (the

"'025 Patent"), United States Patent No. 9,986,303 (the "'303 Patent"), United States Patent No. 10,218,995 (the "'995 Patent"), United States Patent No. 8,139,150 (the "'150 Patent"), and United States Patent No. 9,445,041 (the "'041 Patent") (collectively "the Asserted Patents").

I. Agreed Constructions (P.R. 4-3(a)(1))

The parties have agreed on the construction of the claim terms in the table below.

Claim Term(s), Phrase(s), or Clause(s)	Patent / Claim	Agreed Construction
"emphasis processing"	'128 Patent, Claims 1, 4	"increasing the amplitude of the high frequency components of a video signal"
"emphasis level"	'128 Patent, Claims 1-4	"a value that represents the amount by which the amplitude of the high frequency components of the video signal is increased"
"border motion-vector data" / "border motion vector data"	'025 Patent, Claims 6-8, 10	"data representing the difference in spatial position between a border of the block to be predicted in the picture to be coded and the best-matched border in the reference picture"
"a factor of a group of pictures"	'303 Patent, Claims 1-2	"one or more groups of pictures"
"reconstructing video image coding data from the basic video image coding data and the supplementary video image coding data"	'303 Patent, Claims 1-2	"rearranging basic video image coding data with supplementary video image coding data"
"a moving image data output unit that outputs the first and second moving image data whose frame rates have been converted by the frame rate conversion unit"	'041 Patent, Claim 1	Subject to § 112 p. 6: **Function:** "output[] the first and second moving image data whose frame rates have been converted by the frame rate conversion unit" **Structure:** monitor 207 or external display apparatus and equivalents thereof

The parties will continue working together to narrow the number of disputed claim terms.

II. Disputed Claim Terms, Phrases, or Clauses (P.R. 4-3(a)(2))

The parties' proposed constructions of each disputed claim term, phrase, or clause of the Asserted Patents are set forth below. Identification of evidence that supports these constructions is attached as Exhibit 1. Each party reserves the right to cite to intrinsic and/or extrinsic evidence cited by the other parties.

#	Claim Term(s), Phrase(s), or Clause(s)	Patent/Claim	ACT's Proposed Construction	LG's Proposed Construction	Samsung's Proposed Construction
1.	"boundary condition"	'025 Patent, Claims 6-8, 10	"data pertaining to the pixels at the boundary of a block"	"a gradient of a video signal on a straight edge of a rectangular block"	
2.	"[an estimated video signal…] that satisfies Poisson's Equation"	'025 Patent, Claims 6-8, 10	"[an estimated video signal…] where the Laplacian of the estimated video signal 'u' may be represented as an expression of '*Kj,*' a source term, based on boundary condition(s)"	Indefinite	"[an estimated video signal…] that makes the equation $\Delta uj = Kj$ true, where 'u' is the estimated signal in a block, '*Kj*' is a source term, and Δuj is a Laplacian of the estimated signal 'u.'" / Indefinite
3.	"the input signal being obtained by multiplexing a coded bitstream obtained by predictive coding, border motion-vector data and post-quantization data obtained by quantization in the predictive coding"	'025 Patent, Claims 6-8, 10	Plain and ordinary meaning	Indefinite	
4.	"prescribed"	'995 Patent, Claims 2-4, 11	Plain and ordinary meaning	Indefinite	
5.	"standard resolution"	'995 Patent, Claims 2-4, 11	Plain and ordinary meaning	"the spatial resolution of a picture input as an encoding target"	
6.	"decoding with an extension of the standard resolution"	'995 Patent, Claims 2-4, 11	"decoding with a non-base spatial layer based	Indefinite	

#	Claim Term(s), Phrase(s), or Clause(s)	Patent/Claim	ACT's Proposed Construction	LG's Proposed Construction	Samsung's Proposed Construction
			on standard resolution reference picture(s)."		
7.	"super-resolution enlarged decoded picture"	'995 Patent, Claims 2-4, 11	Plain and ordinary meaning	Plain and ordinary meaning in the art, which is "higher than standard resolution picture created using two or more different decoded standard resolution pictures"	
8.	"first means for decoding the coded information in the coded multi-view video signal to recover the desired delay times for the coded signals originating from the picture signals corresponding to the viewpoints except the base viewpoint"	'150 Patent, Claim 1	Subject to § 112 p. 6: **Function:** decoding coded information in a coded multi-view video signal to recover information representative of desired delay times **Structure:** a processor or equivalent thereof configured to perform the algorithm steps of: • receiving coded information in a coded multi-view video signal • decoding coded information in a coded multi-view video signal to recover information representative of desired delay times corresponding to each		Subject to § 112 p. 6: **Function:** decoding coded information in a coded bitstream to recover information representative of desired delay times and identifying the desired delay times from the decoded information **Structure:** a processor configured to perform the algorithm steps of decoding coded information in a coded bitstream to recover information representative of desired delay times and identifying the desired delay times from the decoded information

#	Claim Term(s), Phrase(s), or Clause(s)	Patent/Claim	ACT's Proposed Construction	LG's Proposed Construction	Samsung's Proposed Construction
			viewpoint except the base viewpoint • feeding the recovered information representative of desired delay times to the fourth means		
9.	"second means for decoding the coded signal originating from the picture signal corresponding to the base viewpoint"	'150 Patent, Claim 1	Subject to § 112 p. 6: **Function:** decoding a coded signal **Structure:** a processor or equivalent thereof configured to perform the algorithm steps of: • receiving the coded signal originating from the picture signal corresponding to the base viewpoint • decoding the coded signal originating from the picture signal corresponding to the base viewpoint • feeding recovered slice-related parameters of the picture signal corresponding to the base		Subject to § 112 p. 6: **Function:** generating a decoded picture signal by performing motion-compensated prediction to generate a prediction signal, decoding a coded residual by performing inverse quantization and inverse orthogonal transform on the coded residual signal, and adding the decoded residual signal to the prediction signal **Structure:** a processor that performs the algorithm steps of generating a decoded picture signal by performing motion-compensated prediction

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			viewpoint to the fourth means		to generate a prediction signal, decoding a coded residual by performing inverse quantization and inverse orthogonal transform on the coded residual signal, and adding the decoded residual signal to the prediction signal
10.	"third means for decoding the coded signals originating from the picture signals corresponding to the viewpoints except the base viewpoint"	'150 Patent, Claim 1	Subject to § 112 p. 6: **Function:** decoding coded signal(s) **Structure:** a processor or equivalent thereof configured to perform the algorithm steps of: • receiving the coded signal originating from the picture signals corresponding to the viewpoints except the base viewpoint • decoding the coded signal originating from the picture signals corresponding to the viewpoints except the base viewpoint		Subject to § 112 p. 6: **Function:** generating a decoded picture signal by performing at least one of motion-compensated prediction or disparity prediction to generate a prediction signal, decoding a coded residual signal by performing inverse quantization and inverse orthogonal transform on the coded residual signal, and adding the decoded signal to the prediction signal **Structure:** a processor that performs the

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			• feeding recovered slice-related parameters of the picture signals corresponding to the viewpoints except the base viewpoint to the fourth means		algorithm steps of generating a decoded picture signal by performing at least one of motion-compensated prediction or disparity prediction to generate a prediction signal, decoding a coded residual signal by performing inverse quantization and inverse orthogonal transform on the coded residual signal, and adding the decoded signal to the prediction signal
11.	"fourth means for delaying the decoding of the coded signals by the third means relative to the decoding of the coded signal by the second means by time intervals equal to the desired delay times recovered by the first means"	'150 Patent, Claim 1	Subject to § 112 p. 6: **Function:** delaying the decoding of coded signals **Structure:** a processor or equivalent thereof configured to perform the algorithm steps of: • receiving fed information representative of desired delay times from the first		Subject to § 112 p. 6: **Function:** (i) determining whether the present moment has reached the end of a desired decoding delay time, and if not (ii) delaying decoding of a coded picture until the present moment has reached the end of the desired decoding delay time.

#	Claim Term(s), Phrase(s), or Clause(s)	Patent/Claim	ACT's Proposed Construction	LG's Proposed Construction	Samsung's Proposed Construction
			means and parameters from the second and third means • determining if each given viewpoint corresponds to the base viewpoint or not • delaying or non-delaying the start timing of the decoding of the non-decoded portions of each coded bitstream in accordance with each viewpoint's related information representative of desired delay times		**Structure:** a processor configured to perform the algorithm steps of (i) determining whether the present moment has reached the end of a desired decoding delay time, and if not (ii) delaying decoding of a coded picture until the present moment has reached the end of the desired decoding delay time.
12.	"specify[ing] [the] output frame rate"	'041 Patent, Claims 1, 4, 6	"specify[ing] [the] variable output frame rate"		Plain and ordinary meaning
13.	"a moving image data input unit configured to be input of first moving image data generated at a first frame rate and second image data generated at a second frame rate that is different from the first frame rate"	'041 Patent, Claim 1	Subject to § 112 p. 6: **Function:** "inputting first moving image data generated at a first frame rate and second image data generated at a second frame rate that is different from the first frame rate"		Subject to § 112 p. 6: Indefinite

#	Claim Term(s), Phrase(s), or Clause(s)	Patent/Claim	ACT's Proposed Construction	LG's Proposed Construction	Samsung's Proposed Construction
			Structure: imaging unit 100, and external input devices and memory devices such as those identified in 6:45-7:3 (e.g., TV, PC, SD memory card, DVD, Blue-ray Disc, flash memory, wireless modules, etc.) and equivalents thereof		
14.	"an input frame rate specification unit configured to specify the first frame rate of the first moving image data and the second frame rate of the second moving image data, the first and second moving image data having been input into the moving image data input unit"	'041 Patent, Claim 1	Subject to § 112 p. 6: **Function:** specifying input frame rates **Structure:** Software algorithm that performs the steps of: • Receiving input moving image data • Specifying the first frame rate of the first moving image data input into the moving image data input unit and specifying the second frame rate of the second moving image data input into the moving image data input unit		Subject to § 112 p. 6: Indefinite

#	Claim Term(s), Phrase(s), or Clause(s)	Patent/Claim	ACT's Proposed Construction	LG's Proposed Construction	Samsung's Proposed Construction
			• Transmitting the specified input frame rates to the frame rate conversion unit		
15.	"an output frame rate specification unit configured to specify output frame rate of the first moving image data and output frame rate of the second moving image data that have been input into the moving image data input unit"	'041 Patent, Claim 1	Subject to § 112 p. 6: **Function:** specifying variable output frame rates **Structure:** Software algorithm that performs the steps of: • Specifying variable output frame rates for each of the first moving image data and the second moving image data that have been input into the moving image data input unit • Transmitting specified output frame rates to frame rate conversion unit		Subject to § 112 p. 6: Indefinite
16.	"a playback speed specification unit configured to specify a same playback speed for the first moving image	'041 Patent, Claim 1	Subject to § 112 p. 6: **Function:** specifying playback speed		Subject to § 112 p. 6: **Function**: "to specify a same playback speed for the first moving image

#	Claim Term(s), Phrase(s), or Clause(s)	Patent/Claim	ACT's Proposed Construction	LG's Proposed Construction	Samsung's Proposed Construction
	data and the second moving image data"		**Structure:** Software algorithm that performs the steps of: • Specifying a same playback speed for the first moving image data and the second moving image data • Transmitting the specified playback speed to the frame rate conversion unit		data and the second moving image data" **Structure**: Software that carries out the following algorithm: 1. Has user selected a playback speed? 2. If so, set playback speed to user-specified playback speed.
17.	"a frame rate conversion unit configured to change a frame rate of the first moving image data based on the first frame rate, the output frame rate, and the playback speed, and change a frame rate of the second moving image data based on the second frame rate, the output frame rate, and the playback speed"	'041 Patent, Claim 1	Subject to § 112 p. 6: **Function:** converting frame rates **Structure:** Software algorithm that performs the steps of: • Receiving specified input frame rate and specified output frame rate for each of the first and second moving image data and receiving specified playback speed for both the first and second moving image data		Subject to § 112 p. 6: **Function:** "to change a frame rate of the first moving image data based on the first frame rate, the output frame rate, and the playback speed, and change a frame rate of the second moving image data based on the second frame rate, the output frame rate, and the playback speed" **Structure:** Software that carries out the following algorithm:

#	Claim Term(s), Phrase(s), or Clause(s)	Patent/Claim	ACT's Proposed Construction	LG's Proposed Construction	Samsung's Proposed Construction
			• Converting input frame rate to a frame rate that is output, for each of the first moving image data and second moving image data, based on the received specified input frame rate, specified output frame rate, and specified playback speed • Transmitting converted frame rate(s) to the moving image data output unit, for each of the first moving image data and second moving image data, to be output at the converted frame rate(s)		1. Determine if playback speed is low, normal, or high. 2. Apply formula x=Fout/M*Fin to determine change multiplier. 3. If change multiplier is less than 1, then apply decimation to reduce rate by change multiplier. 4. If change multiplier is greater than 1, then apply interpolation to increase rate by change multiplier.

III. Claim Construction Briefing and Hearing (P.R. 4-3(a)(3), P.R. 4-3(a)(4))

A. Length of Time for the Hearing

The parties anticipate that the claim construction hearing will run about four hours in length.

B. Witnesses

The parties do not anticipate calling any witnesses at the Markman hearing in support of the parties' respective claim construction arguments.

Dated: March 5, 2024

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on March 5, 2024, a true and correct copy of the above and foregoing document has been served on all counsel of record who are deemed to have consented to electronic service via the Court's CM/ECF system per Local Rule CV-5(a)(3).

/s/ Alfred R. Fabricant
Alfred R. Fabricant

CERTIFICATE OF CONFERENCE

The undersigned hereby certifies that Plaintiff's counsel has met and conferred with counsel for Defendants, and all parties have agreed to the submission of the P.R. 4-3 Claim Construction and Prehearing Statement submitted herewith.

/s/ Alfred R. Fabricant
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