

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

<b>In the Matter of</b>	)	
	)	
<b>Request of PTC-220, LLC for Waivers of</b>	)	<b>WT Docket No. 08-256</b>
<b>Certain 220 MHz Rules</b>	)	
	)	
<b>Construction Progress Report</b>	)	

**To: Chief, Wireless Telecommunications Bureau**

**PTC-220, LLC  
CONSTRUCTION PROGRESS REPORT**

**I. INTRODUCTION**

PTC-220, LLC (“PTC-220”) submits this Construction Progress Report to satisfy the requirements of paragraph 16 of the Memorandum Opinion and Order (“*2009 Waiver Order*”) adopted by the Federal Communications Commission (“FCC”) on June 25, 2009.<sup>1</sup> This Report details the progress made during the past six months in implementing the Systemwide Build-out Plan (the “Build-out Plan”) submitted by PTC-220 on November 1, 2010 in the above-referenced docket. The Build-out Plan explained how PTC-220’s 220 MHz licenses (“Licenses”) would be used in deploying a nationwide positive train control (“PTC”) system, as required by Federal statute.<sup>2</sup> The construction of the Licenses will be undertaken in large part by each of PTC-220’s

---

<sup>1</sup> *Request of PTC-220, LLC for Waivers of Certain 220 MHz Rules*, Memorandum Opinion and Order, 24 FCC Rcd 8537 (2009).

<sup>2</sup> In October 2015, Congress extended the PTC implementation deadline from December 31, 2015 to December 31, 2018. *See* Positive Train Control Enforcement and Implementation Act of 2015, Pub. L.

member railroads,<sup>3</sup> although PTC-220 will also coordinate construction activities by non-member railroads.

## **II. SITE BUILD-OUT ACTIVITY**

Since the November 1, 2017 Report,<sup>4</sup> PTC-220's member railroads have continued to build new or prepare existing base station sites and install base station radios. As before, preparatory work at existing sites includes, among other things, coverage predictions, design and installation of antenna systems, upgrading of site power systems, site pre-wiring, and backhaul design. The table below indicates the progress to date for each PTC-220 member railroad, by state, for base station site preparation and base radio installations. Some of the installed radios are being actively used in various field testing programs, while others are currently powered off, awaiting final frequency coordination. However, most of the installed radios are in service and supporting PTC Revenue service operations.

---

No. 114-73 § 1302, 129 Stat. 568 (2015) ("*2015 PTC Act*"); 49 U.S.C. § 20157(a)(1). In light of the new statutory deadline, PTC-220 in December 2015 filed requests for a further extension of its substantial service deadlines until December 31, 2018. The FCC granted these requests in March 2016.

<sup>3</sup> PTC-220's members are BNSF Railway ("BNSF"), Canadian National Railway ("CN"), Canadian Pacific Railway ("CP"), CSX Transportation ("CSX"), Kansas City Southern Railway ("KCS"), Norfolk Southern Railway ("NS"), and Union Pacific Railroad ("UP").

<sup>4</sup> *Request of PTC-220, LLC for Waivers of Certain 220 MHz Rules*, PTC-220, LLC Construction Progress Report, WT Docket No. 08-256 (November 1, 2017).

State	BNSF		CN		CP		CSX		KCS		NS		UP	
	Site Prep	Radio	Site Prep	Radio	Site Prep	Radio	Site Prep	Radio	Site Prep	Radio	Site Prep	Radio	Site Prep	Radio
AL	4	4	2	0			48	47			45	45		
AR	7	6							9	9			30	30
AZ	21	21											13	13
CA	39	39											107	107
CO	21	21											61	61
FL							25	23			2	2		
GA							32	28			40	40		
IA	26	26	16	0	23	23							25	25
ID	5	5											24	24
IL	42	41	37	32	6	6	27	25	5	5	26	26	53	54
IN			3	3			50	46			30	30		
KS	38	38							3	3			36	36
KY			3	3			82	80			14	14		
LA	6	6	7	7			1	1	29	29	2	2	22	22
MA							16	16						
MD							39	36			3	3		
MI			18	18			16	11			5	6		
MN	36	36	7	7	29	19							3	3
MO	41	41			7	7			14	14	7	7	29	29
MS	3	3	26	15			3	3	12	12	11	11		
MT	67	67												
NC							43	43			27	27		
ND	54	54			16	15								
NE	32	32											38	38
NJ							6	6						
NM	16	16											15	15
NV													58	58
NY					14	14	66	60			5	5		
OH			1	1			69	67			32	30		
OK	26	26							6	6			10	10
OR	13	9											81	81
PA							61	60			70	51		
SC							49	49			22	22		
SD	10	10												
TN	2	2	6	6			64	60			30	30	1	1
TX	58	58							25	25			135	135
UT													39	39
WA	53	53											18	18
WI	3	3	21	20	15	15							15	15
WV							104	103			9	9		
WY	1	1											28	28
VA							68	63			33	33		
<b>Total</b>	<b>624</b>	<b>618</b>	<b>147</b>	<b>112</b>	<b>110</b>	<b>99</b>	<b>869</b>	<b>827</b>	<b>103</b>	<b>103</b>	<b>413</b>	<b>393</b>	<b>841</b>	<b>842</b>

Totals	
Site Prep	Radio
3,107	2,994

In addition to the base station deployment programs, PTC-220 member railroads are installing mobile radios in their locomotive fleets.

### **III. SPECTRUM**

#### **A. Interference Resolution**

As previously reported, the two different PTC technologies, I-ETMS (used by freight railroads) and ACSES (used by passenger railroads) have the potential to desensitize each other's receivers, creating harmful interference when the two systems are operated in close geographic and spectral proximity. PTC-220 worked for more than two years on solutions to create greater spectral separation between the two PTC technologies along the Northeast Corridor. PTC-220 is pleased to report that this work has now been completed. In November and December 2017, PTC-220 closed transactions with Amtrak and the Massachusetts Bay Transportation Authority ("MBTA"), respectively, involving an exchange of 217 MHz (AMTS) spectrum acquired by PTC-220 in the greater Boston area, with 220 MHz spectrum held by Amtrak and MBTA. This exchange enables Amtrak and MBTA to operate ACSES on 217 MHz in close proximity to PTC-220's I-ETMS operations on 220 MHz.

#### **B. Spectrum Capacity**

PTC-220 has concluded that, based on PTC-220's capacity prediction models, it currently has sufficient spectrum capacity for member and non-member railroad lessees to satisfy their PTC deployment obligations required by the December 31, 2018 deadline established pursuant to the Rail Safety Improvement Act of 2008 ("RSIA"), as amended by the 2015 PTC Act. However, PTC-220 has identified a few dozen markets across the country where it will likely require additional spectrum in future years to provide for additional capacity as more PTC traffic comes online by the December 31, 2020 full deployment legislative deadline, as well as to provide for increased reliability and functionality as anticipated improvements to the PTC

networks (*i.e.*, going beyond the minimum Federal Railroad Administration requirements) are implemented. PTC-220 is currently evaluating various options for acquiring additional spectrum in the secondary markets and anticipates that it will be submitting one or more applications for assignment of spectrum in the coming months.

### **C. Non-Member Spectrum Leases**

PTC-220 currently has active spectrum manager leases with several non-member railroads including CalTrain, Conrail, MetroLink, North Country Transit District, Metra, Sound Transit, and the Terminal Railroad Association of St. Louis. Dallas Area Rapid Transit, the South Florida Regional Transportation Authority and the State of Florida, DOT, have entered into sublease arrangements with PTC-220 members BNSF and CSX, respectively. In addition, Amtrak and Metro North testing leases have been further extended to May 15, 2018 and December 31, 2018 respectively. Three other non-member railroads are currently considering leasing arrangements with PTC-220, and PTC-220 anticipates possible future negotiations with other non-member railroads. Some short-line railroads may also need long-term spectrum leases, depending on the PTC requirements of their owned track.

#### IV. CONCLUSION

During the past six months, PTC-220 has completed the resolution of potential interference issues along the Northeast Corridor. PTC-220 is now focusing on options for satisfying its anticipated future spectrum needs beyond the RSIA's December 31, 2018 deadline.

Respectfully submitted,

/s/ Kim Simmonds

Kim Simmonds  
President  
PTC-220, LLC  
17641 S. Ashland Ave.  
Homewood, IL 60430  
Phone: (514) 399-4257  
Kim.Simmonds@cn.ca

/s/ Michele C. Farquhar

Michele C. Farquhar  
David L. Martin  
Hogan Lovells US LLP  
555 Thirteenth Street, NW  
Washington, DC 20004  
Phone: (202) 637-5663  
Facsimile: (202) 637-5910  
Michele.Farquhar@hoganlovells.com

*Counsel to PTC-220, LLC*

May 1, 2018