

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

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

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, 2009.¹ 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.² The construction of the Licenses will be undertaken in large part by each of PTC-220’s

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

² 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. 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.

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

II. SITE BUILD-OUT ACTIVITY

Since the October 30, 2015 Report,⁴ 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.

State	BNSF		CN		CP		CSX		KCS		NS		UP	
	Site Prep	Radio												
AL	4	4					51	43			44	44		
AR	7	6							9	7			28	28
AZ	20	20											9	8
CA	39	39											73	73
CO	20	15											9	5
FL							48	17			2	2		
GA							35	26			40	40		
IA	26	25			23	22							17	15
ID	5	5											20	20
IL	42	41	31	22	6	4	23	13			23	23	41	41
IN			6	1			56	30			28	28		

³ 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”).

⁴ *Request of PTC-220, LLC for Waivers of Certain 220 MHz Rules*, PTC-220, LLC Construction Progress Report, WT Docket No. 08-256 (October 30, 2015).

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
KS	35	35							3	2			29	27
KY			5	5			103	65			14	14		
LA	6	5	8	6			1	1	21	8	2	2	20	20
MA							15	11						
MD							29	19			2	2		
MI			9				6	0						
MN	33	33	6	4	26	18							1	1
MO	40	40			7	4			8	8	7	7	24	24
MS	3	3	13	13			3	3	6		11	11		
MT	68	68												
NC							57	33			20	20		
ND	53	53			15	9								
NE	32	32											38	38
NJ							3	3						
NM	16	16											12	12
NV													32	32
NY					13	13	56	41			2	2		
OH							73	37			17	17		
OK	26	26							6	4			9	7
OR	2	2											72	72
PA							33	23			21	18		
SC							37	27			22	22		
SD	5	5												
TN	2	2	4	4			75	48			26	26	1	1
TX	52	52							18	1			109	109
UT													21	21
WA	53	53											13	13
WI	3	3	22	18	14	11							3	1
WV							102	68			3	3		
WY	1	1											22	22
VA							64	42			31	31		
Total	593	584	104	73	104	81	870	550	71	30	315	312	603	590

Totals	
Site Prep	Radio
2,660	2,220

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

III. SPECTRUM

New Jersey/New York Spectrum Acquisition Completed. On March 30, 2016, PTC-220 consummated a transaction with NRTC LLC that involved the partitioning, disaggregation and assignment of additional 220 MHz spectrum to PTC-220 in certain counties in northern New Jersey and New York. This will provide PTC-220 with needed spectrum capacity for the provision of PTC along this congested section of the Northeast Corridor (“NEC”).

Remaining NEC Spectrum Issues. 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 has identified greater Philadelphia and New England as the two areas along the NEC where this interference scenario is predicted to be a serious problem. In an effort to resolve this interference issue, PTC-220 has been actively pursuing the acquisition of additional spectrum in these areas that could be used to provide for greater spectral separation between the two systems.

In January, PTC-220 consummated the acquisition of 218 MHz Service license KIVD0007 covering portions of the Philadelphia area. However, this license does not cover all of the needed counties; the spectrum for those counties is held in the FCC’s inventory. Therefore, in March PTC-220 submitted an application for license modification, requesting that 250 kHz of the spectrum from KIVD0007 be exchanged for 250 kHz of spectrum from the FCC’s inventory covering the additional counties. This application is currently pending.

In New England, the path to obtaining the necessary additional spectrum is less clear. The FCC holds 218 MHz Service spectrum in this area in its inventory, and the relevant 217 MHz licenses (AMTS) are either not for sale or are heavily encumbered by an incumbent license which cannot be assigned until the FCC resolves a long-pending proceeding involving the incumbent. PTC-220 has expended considerable resources and continues to actively investigate alternative solutions to obtain the needed spectrum free of incumbents, but at this time is not confident that the necessary agreements can be reached with third parties in the coming weeks. Given the long lead time needed to transition the spectrum, the inability to resolve this spectrum issue in the near term may delay the PTC implementation schedule in New England.

Non-Member Spectrum Leases. PTC-220 currently has active spectrum manager leases with several non-member railroads including CalTrain, MetroLink, North Country Transit District, and Sound Transit. In addition, Amtrak, Conrail, Metra, Metro North, and the Massachusetts Bay Transportation Authority have signed testing leases. PTC-220 is in active leasing negotiations with three other non-member railroads, and PTC-220 anticipates future negotiations with an additional eight railroads. Some short-line railroads may also need a long-term spectrum lease, depending on the PTC requirements of their owned track.

IV. INTERNATIONAL CROSS-BORDER SPECTRUM ARRANGEMENTS

PTC-220 continues to work with the FCC's International and Wireless Telecommunications Bureaus to ensure that PTC can operate without undue limitation along the nation's international borders. As described in the last report, the new arrangement with Canada was an important accomplishment that provides certainty for PTC deployments along the northern border. In the past six months, there has also been significant progress regarding the situation along the southern border, although a new agreement still remains to be finalized.

At the beginning of March, the FCC received a new markup of the US/Mexico cross border arrangement from the Mexican regulator, the *Instituto Federal de Telecomunicaciones* (“IFT”). Representatives of the FCC and IFT met in mid-March and were able to reach agreement on a number of issues. Follow-up communications between the agencies continued and PTC-220 understands that an agreement in principle on key issues may have been reached. However, the process of formalizing the new arrangement will still require additional time and will include coordination with the State Department and its counterpart in Mexico. It is important that this process proceed expeditiously so that PTC construction near the border is not further delayed. If it becomes evident that this process will take additional time to complete, PTC-220 member railroads may need to pursue alternative arrangements, such as applications for special temporary authority, to allow operations near the Mexican border until the new agreement is in effect.

V. CONCLUSION

During the past six months, PTC-220 has focused on resolving its final spectrum needs along the Northeast Corridor and on promoting a new arrangement with Mexico governing the 220 MHz band along the border region. PTC-220 is optimistic that the border arrangement can be finalized in the near term and, assuming prompt FCC action on the pending modification application, that the Philadelphia area interference issue can be resolved this year. Despite its best efforts, however, PTC-220 remains concerned that it currently has no clear option for obtaining unencumbered 217 MHz spectrum in New England. Without a near term solution, PTC deployment delays in this area are likely.

Respectfully submitted,

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