BROADCAST INCENTIVE AUCTION
PUBLIC REPORTING SYSTEM DATA FILES

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1 Introduction

This document provides the data file specifications for the public files that will be available in the Public Reporting System (PRS) after the conclusion of the incentive auction. Each file specification includes the format of the file and definitions of the data elements in the files, including a name, description, data type, examples and notes. Data type definitions and notation rules are explained in an appendix attached to this document.

2 Reverse Auction Files

This section provides the specifications of the download files available to the public for the reverse auction after the Federal Communications Commission releases the *Incentive Auction Closing and Channel Reassignment Public Notice*, which will announce, among other things, the results of the reverse and forward auctions. Note that in the *Incentive Auction Report and Order*, the Commission decided that it would release information about winning reverse auction bids and bidders at the close of the reverse auction, while keeping confidential other reverse auction information. The Commission also decided in the *Incentive Auction Report and Order* that it would release additional information related to bids and bidders in the reverse auction two years after the close of the auction.

2.1 Reverse Auction Summary

File name: reverse-auction_summary.csv

The Reverse Auction Summary file contains summary information about the reverse auction. In addition to information about the clearing target and bidding schedule, this file provides the base clock price and decrement parameter values for each round. The last round of each stage also provides the cost of clearing (i.e., the total compensation for provisionally winning bids).

File Structure:

- CSV file (first row contains header)
- One record for each stage, clearing target, and round combination that occurred in the reverse auction

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the reverse auction	String	1001
stage	Stage number	Integer	1
clearing_target	Clearing target in megahertz	Integer	126
licensed_spectrum	Licensed spectrum in megahertz	Integer	100
round	Round number	Integer	2
start_time	Round start date and time	Date-time YYYY-MM-DD HH:MM:SS	2016-06-15 16:00:00
end_time	Round end date and time	Date-time YYYY-MM-DD HH:MM:SS	2016-06-15 17:00:00
base_clock_price	Base clock price	Decimal	262.79012190489544

Name	Description	Data Type	Example/*Notes*
price_decrement_r1	Parameter used in determining price offers: the percent decrement of the previous round's base clock price	Integer	5
price_decrement_r2	Parameter used in determining price offers: the percent decrement of the opening base clock price ($900)	Integer	1
pw_compensation	The sum of the provisionally winning compensation across all stations at the end of the stage	Integer	86422558704 *NULL except for the last round of each stage*

2.2 Reverse Auction Announcements

File name: reverse-announcements.csv

The Reverse Auction Announcements file contains all the reverse auction public announcements and the date and time they were posted.

File Structure:

- CSV file (first row contains header)
- One record for each announcement

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the reverse auction	String	1001
stage	Stage number	Integer	1
time	The date and time of the announcement	Date-Time YYYY-MM-DD HH:MM:SS	2016-10-06 13:00:00
subject	The subject of the announcement	Text	Welcome to Stage 1
announcement	The text of the announcement	Text	Welcome to Stage 1 of the reverse auction.

2.3 Reverse Auction Winning Bids

File name: reverse-winning_bids.csv

The Reverse Auction Winning Bids file contains information about the winning stations in the reverse auction and their winning bids. For each winning bid the file contains the winning bid option and associated compensation. The file also contains information about the winning station including its DMA, pre-auction band, and whether the station indicated in its Form 177 that it intended to enter in to a channel sharing agreement either before or after the auction. Finally, the file lists the station's FRN as of the release of the *Incentive Auction Closing and Channel Reassignment Public Notice (CCR PN).*

File Structure:

- CSV file (first row contains headers)

- One record for each winning bid

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the reverse auction	String	1001
call_sign	The station's call sign	String	KVME-TV
facility_id	The station's facility ID	String {1,7}	65684
dma	The name of the station's Designated Market Area	String {0,50}	Denver, CO
bidder_as_of_closing_pn	Bidder name when the *CCR PN* is released	String {0,50}	ALL Broadcasting
frn_as_of_closing_pn	The bidder's FCC Registration Number (FRN) when the *CCR PN* is released	Alpha-numeric {10}	0024413338
pre_auction_band	The band in which the station is operating before the auction	String [Low-VHF|High-VHF|UHF]	High-VHF
winning_bid_option	The winning bid option	String [Go off-air|Move to Low-VHF|Move to High-VHF]	Go off-air
compensation	The winning compensation amount	Integer	5000000
pre_auction_csa_flag	Indicates whether or not the station selected on its Form 177 that it intended to enter in to a channel sharing agreement before the auction	String {Yes|No}	Yes
post_auction_csa_flag	Indicates whether or not the station selected on its Form 177 that it intended to enter in to a channel sharing agreement after the auction	String {Yes|No}	No

3 Forward Auction Clock Phase Files

This section provides the specifications of the download files available to the public for the clock phase of the forward auction.

3.1 Forward Auction Summary

File name: forward-auction_summary.csv

The Forward Auction Summary file contains summary information about the forward auction clock phase rounds. Specifically this file contains the data that was displayed on the PRS Dashboard during each round of the clock phase including information about the clearing target, the final stage rule, and the bidding schedule. This file also contains the price increment and required bidding activity for each round.

File Structure:

- CSV file (first row contains header)
- One record for each stage and round combination that occurred in the forward auction clock phase

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	String	1002
stage	Stage number	Integer	1
clearing_target	Clearing target in megahertz	Integer	126
licensed_spectrum	Licensed spectrum in f megahertz	Integer	100
round	Round number	Integer	1
start_time	Round start date and time	Date-time YYYY-MM-DD HH:MM:SS	2016-08-16 10:00:00
end_time	Round end date and time	Date-time YYYY-MM-DD HH:MM:SS	2016-08-16 16:00:00
round_type	Round type	String [Initial|Regular|Extended]	Regular
final_stage_rule_met	Indicates whether the final stage rule has been met	String [Y|N]	N
target_gross_proceeds	The gross proceeds needed to satisfy the first component of the final stage rule, applicable only for clearing targets greater than 84 MHz	Integer	15896290987 *Null for clearing targets of 84 MHz or below*
gross_proceeds	The actual gross proceeds at the conclusion of the round	Integer	8490410000
target_net_proceeds	The net proceeds needed to satisfy the second component of the final stage rule	Integer	88379558704 *Null for all rounds after the final stage rule is met*

Name	Description	Data Type	Example/*Notes*
estimated_net_proceeds	The estimated net proceeds at the conclusion of the round	Integer	8040000000 *Null for all rounds after the final stage rule is met*
target_price_per_mhz_pop	The target price per MHz-pop for Category 1 products in the top forty PEAs needed to satisfy the first component of the final stage rule, applicable only for clearing targets of 84 MHz or less	Decimal	1.25 *Null for clearing targets greater than 84 MHz and after the final stage rule has been met*
actual_price_per_mhz_pop	The actual price per MHz-pop for Category 1 products in the top forty PEAs at the conclusion of the round	Decimal	0.44016729 *Null for clearing targets greater than 84 MHz and after the final stage rule has been met*
price_increment	The increment percentage used in setting the clock price offers for the round	Integer	5
activity_requirement	The activity requirement percentage used in determining a bidder's required activity for the round	Integer	95

3.2 Forward Auction Announcements

File name: forward-announcements.csv

The Forward Auction Announcements file contains all the public announcements related to the forward auction clock phase and the date and time they were posted.

File Structure:

- CSV file (first row contains header)
- One record for each announcement

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	String	1002
stage	Stage number	Integer	1
time	The date and time of the announcement	Date-Time YYYY-MM-DD HH:MM:SS	2016-11-06 13:00:00
subject	The subject of the announcement	Text	Welcome to Stage 1
announcement	The text of the announcement	Text	Welcome to the clock phase portion of the forward auction.

3.3 Forward Auction Bids

File name: forward-bids.csv

The Forward Auction Bids file contains information about all the bids placed during the clock phase of the forward auction. In addition to providing information about the quantity and price of the bids placed each round, the file provides information about the associated products such as the opening price and clock price, the supply, and the bidder's processed demand for that product.

File Structure:

- CSV file (first row contains header)
- One record per stage, round, and bid combination
- The file may also contain bids submitted by the Auction System if no bid was submitted by the bidder (missing bids). In case of a missing bid the Auction System submitted a simple bid for a quantity of 0 at the lowest possible price for the product in that round.
- The file contains two entries for each switch bid: one for the "from" category and one for the "to category". The "from" and "to" categories are listed in both records in switch_from_category and switch_to_category.
- The file contains two entries for each all-or-nothing bid with a backstop. The first entry, bid_type ="AON+", contains the price, price point, and selection number of the all-or-nothing bid. The second entry, "bid_type" = "Backstop", contains the price, price point, and selection number of the backstop bid.

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	String	1002
stage	Stage number	Integer	1
round	Round number	Integer	12
market_number	PEA (Partial Economic Area) ID	String (["PEA"][0-9] [0-9][0-9]){6}	PEA001
market_name	PEA name	String	"New York, NY"
category	License category	String [C1|C1-R|C1-U|C2]	C1 *C1 = Category 1* *C1-R = Category 1 Reserved* *C1-U = Category 1 Unreserved* *C2 = Category 2*
bidding_units	Number of bidding units associated with the product	Integer	2300
bidder	Bidder name	String	Company XYZ "ABC, Inc."
frn	The bidder's FCC Registration Number (FRN)	Alpha-numeric {10}	0003645843

Name	Description	Data Type	Example/*Notes*
bid_type	Type of bid	String [Simple|AON|AON+|Switch|Backstop]	Simple *AON = All-or-nothing* *AON+ = All-or-nothing with backstop* *Backstop = backstop bid associated with an AON+*
quantity	Number of blocks requested	Integer	2 *This value is the requested quantity for the product (not the number of blocks to be reduced or switched).*
bid_amount	Requested price per block	Integer	12500000 *For the "to" product in a switch bid, this value is the clock price associated with the product.*
price_point	The price point associated with the bid.	Decimal [0-1] {12}	0.7560548272 *In round 1 this value is 1.0000000000.* *For the "to" product in a switch bid, this value will always be 1.0000000000 regardless of the price point of the "from" product.*
switch_from_category	For the "to" product in a switch bid, this field indicates the license category of the "from" product in a switch bid.	String [C1|C1-R|C1-U|C2]	C1-U *NULL for Simple, AON, AON+ bid types, and the "from" product of a switch bid*
switch_to_category	For the "from" product in a switch bid, this field indicates the license category of the "to" product in a switch bid.	String [C1|C1-R|C1-U|C2]	C1-R *NULL for Simple, AON, AON+ bid types and the "to" product of a switch bid*
supply	The supply of blocks associated with the product	Integer	8
prev_round_processed_demand	The bidder's processed demand for the product at the start of the round	Integer	4 *NULL for Stage 1, Round 1*

Name	Description	Data Type	Example/*Notes*
prev_round_aggregate_demand	The aggregate demand for the product at the start of the round	Integer	12 *NULL for Stage 1, Round 1*
round_opening_price	The lowest price available for bidding on the product in the round	Integer	11500000 *In Stage 1, Round 1 this is the opening price. For all other rounds it is the posted price from the previous round.*
round_clock_price	The clock price (highest price) of the product in the round	Integer	12650000
selection_number	The pseudo-random number associated with the bid used for tie-breaking purposes. If two or more bids are at the same price point, the one with the smallest selection number is considered first during bid processing.	Integer	123456789012345 *This field is NULL in round 1 of the initial stage.*

3.4 Forward Auction Results

File name: forward-results.csv

The Forward Auction Results file contains the results of bid processing for each round in the forward auction clock phase. For each product (PEA and license category combination) associated with a bidder's bid, the file gives the processed demand, posted price and the aggregate demand. Additionally, if a bid was not fully applied, the file provides an indication of such and details about why one or more bids for the product were not applied.

File Structure:

- CSV file (first row contains header)
- One record for each stage, round, and product combination where the bidder had processed demand for the product in that round or in the previous round

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	String	1002
stage	Stage number	Integer	1
round	Round number	Integer	12
market_number	PEA (Partial Economic Area) ID	String ([“PEA”][0-9] [0-9][0-9]){6}	PEA001
market_name	PEA name	String	“New York, NY”

Name	**Description**	**Data Type**	**Example/*Notes***
category	License category	String [C1|C1-R|C1-U|C2]	C1 *C1 = Category 1* *C1-R = Category 1 Reserved* *C1-U = Category 1 Unreserved* *C2 = Category 2*
bidder	Bidder name	String	Company XYZ "ABC, Inc."
frn	The bidder's FCC Registration Number (FRN)	Alpha-numeric {10}	0003645843
processed_demand	The bidder's demand for the product after processing	Integer	2
processed_demand_flag	Indication if all the bidder's bids for the product were fully processed	Character [Y|N]	Y *If a switch bid is not fully applied, the flag will be "N" in the "from" category of the switch bid. The flag is always "Y" for the "to" category of a switch bid.*

Name	Description	Data Type	Example/*Notes*
processed_demand_detail	Details about why one or more of the bidder's bids for the product were not applied or not fully applied during bid processing	String {500}	"Simple bid to increase demand to 11 @ $147,000,555; 2 blocks was not applied due to insufficient eligibility." "AON bid to reduce demand to 0 @ $36,600,222; 3 blocks was not applied due to insufficient aggregate demand." *If more than one detail message is applicable (e.g. intra-round bids), then the messages are separated with semi-colons.* *For a switch bid that was not fully applied, the detail message is provided in the "from" category of the switch bid* *NULL if all bid(s) for the product were fully applied*
aggregate_demand	The aggregate demand for the product after processing	Integer	15
posted_price	The posted price for the product after processing	Integer	12650000

3.5 Forward Auction Product Status

File name: forward-product_status.csv

The Forward Auction Product Status file provides the status of each product (PEA and license category combination) after bid processing of each round in the forward auction clock phase. For each product the file gives the posted price, aggregate demand and the clock price in the next round. Additionally the file provides supporting information about each product in that round such as the opening price and clock price, the supply, bidding units, and population.

File Structure:

- CSV file (first row contains header)
- One record for each stage, round, and product combination

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	String	1002
stage	Stage number	Integer	1
round	Round number	Integer	12
market_number	PEA (Partial Economic Area) ID	String (["PEA"][0-9] [0-9][0-9]){6}	PEA001
market_name	PEA name	String	"New York, NY"
category	License category	String [C1|C1-R|C1-U|C2]	C1 *C1 = Category 1* *C1-R = Category 1 Reserved* *C1-U = Category 1 Unreserved* *C2 = Category 2*
round_opening_price	The lowest price available for bidding on the product in the round.	Integer	11500000 *In Stage 1, Round 1 this is the opening price. For all other rounds it is the posted price from the previous round.*
round_clock_price	The clock price (highest price) of the product in the round	Integer	12650000
aggregate_demand	The aggregate demand for the product after processing	Integer	15
posted_price	The posted price for the product after processing	Integer	12650000
next_round_clock_price	The clock price (highest price) of the product in the next round	Integer	13915000
bidding_units	Number of bidding units associated with the product	Integer	2300
supply	The supply of blocks for the product	Integer	8
population	The population in the PEA associated with the product	Integer	25237061

3.6 Forward Auction Bidder Status

File name: forward-bidder_status.csv

The Forward Auction Bidder Status file provides information about the bidders after each round of the forward auction clock phase. For each round and bidder, the file gives the bidder's eligibility, required activity and bidding activity in the round. The results of bid processing are also given for the round including the bidder's processed activity as well as the bidder's eligibility and required activity for the

next round. Financial information for both a bidder's requested commitments and its processed commitments are also given.

File Structure:

- CSV file (first row contains header)
- One record for each stage, bidder, and round combination

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	String	1002
stage	Stage number	Integer	1
round	Round number	Integer	12
bidder	Bidder name	String	Company XYZ "ABC, Inc."
frn	The bidder's FCC Registration Number (FRN).	Alpha-numeric {10}	0003645843
bidding_credit_pct	The bidding credit percentage for which the bidder claimed eligibility	Integer	15 *0 = no bidding credit* *15 = 15% bidding credit*
bidding_credit_type	Indicates the type of bidding credit for which the bidder claimed eligibility	String [Rural | Small Business]	Small Business *Rural = bidder is eligible for the rural service provider bidding credit* *Small Business = bidder is eligible for a small business bidding credit* *NULL if the bidder is not eligible for a bidding credit*
eligibility	The bidder's eligibility in bidding units at the start of round	Integer	8000000
required_activity	The bidder's required activity in bidding units for the round	Integer	5000000
activity	The bidder's bidding activity in bidding units for the round	Integer	4000000
req_commitment	The bidder's requested commitment in dollars for the round	Integer	346000000

Name	Description	Data Type	Example/*Notes*
req_commitment_discount_capped	The bidder's requested discount in dollars for the round based on any bidding credits and applying any applicable bidding credit caps	Integer	150000000 *NULL if the bidder is not eligible for a bidding credit*
req_net_commitment	The bidder's requested net commitment in dollars for the round	Integer	296000000 *NULL if the bidder is not eligible for a bidding credit*
req_commitment_discount_uncapped	The bidder's requested discount in dollars for the round based on any bidding credits without applying any applicable bidding credit caps	Integer	156000000 *NULL if the bidder is not eligible for a bidding credit*
req_commitment_discount_uncapped_small	The bidder's requested bidding credit discount in dollars for the round in the small markets without applying any applicable bidding credit caps	Integer	11000000 *Contains a value if the bidder is eligible for a small business bidding credit, NULL otherwise*
processed_activity	The bidder's bidding activity in bidding units after processing	Integer	4100000
commitment	The bidder's commitment in dollars for the round	Integer	348500000
commitment_discount_capped	The bidder's discount in dollars for the round based on any bidding credits and applying any applicable bidding credit caps	Integer	150000000 *NULL if the bidder is not eligible for a bidding credit*
net_commitment	The bidder's net commitment in dollars for the round	Integer	298500000 *NULL if the bidder is not eligible for a bidding credit*
commitment_discount_uncapped	The bidder's discount in dollars for the round based on any bidding credits without applying any applicable bidding credit caps	Integer	156900000 *NULL if the bidder is not eligible for a bidding credit*
commitment_discount_uncapped_small	The bidder's bidding credit discount in dollars for the round in the small markets without applying any applicable bidding credit caps	Integer	11900000 *Contains a value if the bidder is eligible for a small business bidding credit, NULL otherwise*
next_round_eligibility	The bidder's eligibility in bidding units at the start of the next round	Integer	5125000

Name	Description	Data Type	Example/*Notes*
next_round_required_activity	The bidder's required activity in bidding units for the next round	Integer	4100000

3.7 Forward Auction Bidder Market

File name: forward-bidder_market.csv

The Forward Auction Bidder Market file provides information about the PEAs that each forward auction bidder was eligible to bid on during the clock phase based on the PEAs selected on its Form 175 application. It also indicates whether the bidder certified that it was eligible to bid on reserved spectrum in that PEA.

File Structure:

- CSV file (first row contains header)
- One record for each bidder and PEA combination

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	String	1002
market_number	PEA (Partial Economic Area) ID	String (["PEA"][0-9] [0-9][0-9]){6}	PEA001
market_name	PEA name	String	"New York, NY"
bidder	Bidder name	String	Company XYZ "ABC, Inc."
frn	The bidder's FCC Registration Number (FRN)	Alpha-numeric {10}	0003645843
selected_market_flag	Indicates if the bidder selected the PEA on its application form	Character [Y|N]	Y
reserve_eligible_flag	Indicates if the bidder is eligible to bid on reserve blocks in the PEA	Character [Y|N]	Y

3.8 Forward Auction Stage Transition

File name: forward-stage_transition.csv

The Forward Auction Stage Transition file provides information about the change in aggregate demand and supply of products (PEA and license category combinations) from the previous stage after the auction transitioned to a new stage. For each bidder, the file also provides information about the change in the bidder's processed demand for those products.

File Structure:

- CSV file (first row contains header)
- One record for each additional stage (stages 2 – 4) and product combination where the bidder is eligible to bid on the product based on the PEAs it selected on its Form175

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	String	1002
stage	Stage number	Integer	2
market_number	PEA (Partial Economic Area) ID	String (["PEA"][0-9] [0-9][0-9]){6}	PEA001
market_name	PEA name	String	"New York, NY"
category	License category	String [C1|C2]	C1
bidder	Bidder name	String	Company XYZ "ABC, Inc."
frn	The bidder's FCC Registration Number (FRN)	Alpha-numeric {10}	0003645843
prev_stage_supply	The supply of the product in the previous stage	Integer	10
prev_stage_aggregate_demand	The aggregate demand for the product at the conclusion of the previous stage	Integer	10
prev_stage_processed_demand	The bidder's processed demand for the product at the conclusion of the previous stage	Integer	2
current_stage_supply	The supply of the product in the current stage	Integer	9
current_stage_aggregate_demand	The aggregate demand for the product at the start of the current stage	Integer	10
current_stage_processed_demand	The bidder's processed demand for the product at the start of the current stage	Integer	2

3.9 Forward Auction Split Transition

File name: forward-split_transition.csv

The Forward Auction Split Transition file provides information about the supply of products (PEA and license category combinations) before and after implementation of the spectrum reserve (i.e., the split of Category 1 blocks in a PEA into reserved and unreserved blocks that occurred during stage 4 of the clock phase). For each bidder, the file also provides information about how the bidder's demand for those products was allocated during the split. If the Auction System reduced the bidder's processed demand because of changes in the supply of the Category 1 products after the split, this file also provides detailed information about why.

File Structure:

- CSV file (first row contains header)
- One record for each bidder and product combination where the bidder is eligible to bid on the product based on the PEAs it selected on its Form175

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	String	1002
stage	Stage number	Integer	1
round	Round number in which the reserve spectrum split occurred	Integer	12
market_number	PEA (Partial Economic Area) ID	String (["PEA"][0-9] [0-9][0-9]){6}	PEA001
market_name	PEA name	String	"New York, NY"
bidder	Bidder name	String	Company XYZ "ABC, Inc."
frn	The bidder's FCC Registration Number (FRN)	Alpha-numeric {10}	0003645843
reserve_eligible_flag	Indicates if the bidder is eligible to bid on reserve blocks in the PEA	Character [Y|N]	Y
supply_c1	Number of Category 1 blocks available in the PEA before the reserve spectrum split	Integer	8
supply_c2	Number of Category 2 blocks available in the PEA	Integer	8
processed_demand_c1	The bidder's processed demand for Category 1 blocks in the PEA before the reserve spectrum split	Integer	2
processed_demand_c2	The bidder's processed demand for Category 2 blocks in the PEA	Integer	0
supply_c1_r	The supply of Category 1 reserved blocks in the PEA after the reserve spectrum split	Integer	3
supply_c1_u	The supply of Category 1 unreserved blocks in the PEA after the reserve spectrum split	Integer	5
processed_demand_c1_r	The allocation of the bidder's processed demand for Category 1 blocks in the PEA to the reserved spectrum category after the reserve spectrum split	Integer	2
processed_demand_c1_u	The allocation of the bidder's processed demand for Category 1 blocks in the PEA to the unreserved spectrum category after the reserve spectrum split	Integer	0

Name	Description	Data Type	Example/*Notes*
split_selection_number	The pseudo-random number used for tie-breaking purposes that is assigned to the bidder for the PEA. When distributing demand for the reserved product at the split, a reserve-eligible bidder with a larger selection number for a product is given higher priority.	Integer	1837562937 *NULL when the bidder is reserve-eligible in the PEA but does not have any demand for Category 1 blocks* *NULL when the bidder is not reserve eligible in the associated PEA*
split_detail	Details about why a bidder's bids for products in the PEA were not applied or fully applied during bid processing or why the bidder's processed demand for Category 1 blocks in the PEA was reduced at the time of the reserve spectrum split	String	"Simple bid to reduce demand to 1 @ $40,848,999: 1 block was not applied because the final stage rule was met before your bid was processed." "Your processed demand has been reduced due to the supply of C1-U blocks after the reserve spectrum split." *NULL if there are no applicable details*

3.10 Forward Auction Max Reserved Blocks

File name: forward-split_transition.csv

The Forward Auction Max Reserved Blocks file contains information about the maximum number of reserved blocks for each PEA in the next stage. If the reserve spectrum split occurs in the next stage, the maximum for a PEA is used to set the supply of the reserved product for that PEA.

File Structure:

- CSV file (first row contains header)
- One record for each stage and PEA combination (stages 1 – 3)

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	String	1002
stage	Stage number	Integer	1
market_number	Partial Economic Area (PEA) ID	String ([PEA][0-9] [0-9][0-9]){6}	PEA001
market_name	PEA name	String	"New York, NY"

Name	Description	Data Type	Example/*Notes*
max_reserved_blocks	The maximum number of reserved blocks for the next stage. If the split occurs in the next stage, this number is used to set the supply of the reserved product for the PEA.	Integer	2

3.11 Forward Auction License Impairment

File name: forward-license_impairment.csv

The Forward Auction License Impairment file contains a break-down by uplink and downlink of the percent of population with predicted impairment in each license for the associated clearing target and assignment of stations to channels in the 600 MHz Band. The percent of population with predicted impairment in the uplink/downlink portion of the band is calculated by summing the population within all 2x2 km cells with predicted impairment in the uplink/downlink and divided by the total population of the PEA.

File Structure:

- CSV file (first row contains header)
- One record for each stage and license combination

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	Integer	1002
stage	Stage number	Integer	1
market_number	Partial Economic Area (PEA) ID	String (["PEA"][0-9] [0-9][0-9]){6}	PEA004
market_name	PEA name	String	"New York, NY"
block	Block identifier	Character [A-L]{1}	F
category	License category	Character [C1|C2|NS]	C1 *C1 = Category 1* *C2 = Category 2* *NS = Not sold*
percent_impaired	The percent of population associated with the market-block (i.e., license) predicted to be impaired	Numeric [0.0-100.0]{3,5}	11.2
downlink_percent_impaired	The percent of the PEA population with impairments in the downlink portion of the license predicted to be impaired	Numeric [0.0-100.0]{3,5}	7.3
uplink_percent_impaired	The percent of the PEA population with impairments in the uplink portion of the license predicted to be impaired	Numeric [0.0-100.0]{3,5}	3.9

3.12 Forward Auction Markets
File name: forward-markets.csv

This Market file provides information about the geographic markets for which spectrum licenses were auctioned during the forward auction. The geographic markets are Partial Economic Areas (PEAs).

File Structure:

- CSV file (first row contains header)
- One record for each PEA

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	Integer	1002
market_number	Partial Economic Area (PEA) ID	String (["PEA"][0-9][0-9][0-9]){6}	PEA001
market_name	PEA name	String	"New York, NY"
ea_number	The Economic Area in which the PEA is located	String (["EA"][0-9][0-9][0-9]){5}	EA010
reag_number	The REAG associated with the PEA for purposes of assignment phase grouping	String [high demand| REAG 1| REAG 2| REAG 3| REAG 4| REAG 5| REAG 6]	REAG3
population	Population of the market	Integer	25237061
bidding_units	The number of bidding units associated with the market	Integer	25000
high_demand_flag	Indicates if the market is considered a high demand market	Character [Y|N]	Y
small_market_flag	Indicates if the market is subject to the small market bidding cap	Character [Y|N]	N

3.13 Forward Auction Band Plans
File name: forward-band_plans.csv

The Forward Auction Band Plans file contains information about the specific blocks associated with the clearing target and band plan for a given stage of the auction. The number of blocks is the same for each market within a clearing target.

File Structure:

- CSV file (first row contains header)
- One record for each stage, clearing target, and block combination

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	Integer	1002
stage	Stage number	Integer	4
clearing_target	Clearing target in megahertz	Integer	84
block	Block identifier	Character [A-L]{1}	A
downlink_low_frequency	Downlink low frequency	Integer	617
downlink_high_frequency	Downlink high frequency	Integer	622
uplink_low_frequency	Uplink low frequency	Integer	663
uplink_high_frequency	Uplink high frequency	Integer	668

4 Forward Auction Assignment Phase Files

This section provides details about the files that will be available for the assignment phase of the forward auction.[1]

4.1 Assignment Phase Summary

File name: assignment-auction_summary.csv

The Assignment Phase Summary file contains summary information about the assignment phase of the forward auction including information about the clearing target, the bidding schedule, and the round-by-round gross and net proceeds.

File Structure:

- CSV file (first row contains header)
- One record for each round of the assignment phase

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	Integer	1002
stage	Stage number	String "Assignment"	Assignment
clearing_target	Clearing target in megahertz	Integer	84
licensed_spectrum	Licensed spectrum in megahertz	Integer	70
round	Round number	Integer	4
start_time	Round start date and time	Date-time YYYY-MM-DD HH:MM:SS	2016-06-15 16:00:00
end_time	Round end date and time	Date-time YYYY-MM-DD HH:MM:SS	2016-06-15 17:00:00
gross_proceeds	The sum of the aggregate gross payments after the round	Integer	1990000000
net_proceeds	The sum of the aggregate net payments after the round	Integer	1890000000

4.2 Assignment Phase Announcements

File name: assignment-announcements.csv

The Assignment Phase Announcements file contains all the public announcements posted during the assignment phase of the forward auction.

File Structure:

- CSV file (first row contains header)

[1] Some of the files include fields regarding impairments and Category 2 licenses. We note that the incentive auction concluded with the 84 megahertz clearing target. As a result, the 600 MHz band plan includes 70 megahertz of licensed spectrum without any impairments or C2 licenses.

- One record for each announcement

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	Integer	1002
stage	Stage number	String "Assignment"	Assignment
time	Date and time of the announcement	Date-Time YYYY-MM-DD HH:MM:SS	2017-11-06 13:00:00
subject	The subject of the announcement	String	Welcome
announcement	The text of the announcement	Text	Welcome to the assignment phase portion of the forward auction.

4.3 Assignment Phase Assignment Rounds

File name: assignment-assignment_rounds.csv

The Assignment Phase Auction Info file provides information about the round in which each Partial Economic Area (PEA) was assigned during the assignment phase. PEAs that were assigned as part of a group will have the same round number. For each PEA the weighted population used to determine the round in which it was assigned (highest to lowest) is also provided. The weighted population of a group was calculated by summing the weighted population of the PEAs in the group.

File Structure:

- CSV file (first row contains header)
- One record for each PEA

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	Integer	1002
round	Round number	Integer	1
region	The REAG associated with the PEA if the PEA is not a high-demand market, and "high demand" otherwise	String [high demand| REAG 1| REAG 2| REAG 3| REAG 4| REAG 5| REAG 6]	high demand
market_number	PEA ID	String	PEA001
market_name	PEA name	String	"New York, NY"
weighted_population	The population of the PEA weighted by an index of area-specific prices based on prior Commission spectrum auctions	Integer	25237061

4.4 Assignment Phase Bids

File name: assignment-bids.csv

The Assignment Phase Bids file provides information about the bidding options and bids of each bidder in the assignment phase. The file contains for each bidder and each PEA (or PEA group) that the bidder could bid on based on its winnings in the clock phase, the bidder's bidding options and the bid amounts submitted by the bidder for those options. By default a bid for $0 is considered for each bidding option. The random number assigned to each bid by the auction system for purposes of tie breaking is also provided in the file.

File Structure:

- CSV file (first row contains header)
- One record for each bidding option of each bidder

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	String	1002
bidder	Bidder name	String	Company XYZ "ABC, Inc."
frn	The bidder's FCC Registration Number (FRN)	Alpha-numeric {10}	0003645843
round	Round number	Integer	12
region	The REAG associated with the PEA if the PEA is not a high-demand market, and "high demand" otherwise	String [high demand| REAG 1| REAG 2| REAG 3| REAG 4| REAG 5| REAG 6]	REAG 2 high demand
market_number	The Partial Economic Area (PEA) ID(s) associated with the bidding option	String	PEA001 PEA007;PEA009 *Multiple PEAs are separated with semi-colons.*
market_name	The PEA name(s) associated with the bidding option	String	"New York, NY" "Boston, MA;Miami, FL" *Multiple PEAs are separated with semi-colons.*
c1_winnings	The total number of Category 1 blocks that the bidder has in the PEA or PEA group	Integer	2

Name	Description	Data Type	Example/*Notes*
c2_winnings	The total number of Category 2 blocks that the bidder has in the PEA or PEA group	Integer	1
option	The specific frequency blocks in the bidding option	String	BCD
impairment_adjusted_price	The total impairment-adjusted clock-phase price for the option, summed across the frequency blocks in the bidding option	Integer	2960000
assignment_round_bid	The bid amount submitted for the bidding option	Integer	182000 *0 by default or the bid amount submitted by the bidder*
random_number	The random number associated with the bid. These random numbers are included in an optimization to break any ties by choosing the winning assignment that maximizes the sum of the random numbers.	Integer	15435468

4.5 Assignment Phase Bid Options

File name: assignment-bid_options.csv

The Assignment Phase Bid Options file contains the details of the licenses in each bidding option of each bidder. For each license in the bidding option the file provides the block, category, clock phase price, impairment percentage, and impairment discount.

File Structure:

- CSV file (first row contains header)
- One record for each license in a bidding option of a bidder

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	String	1002
bidder	Bidder name	String	Company XYZ "ABC, Inc."
frn	The bidder's FCC Registration Number (FRN)	Alpha-numeric {10}	0003645843
round	Round number	Integer	12

Name	Description	Data Type	Example/*Notes*
region	The REAG associated with the PEA if the PEA is not a high-demand market, and "high demand" otherwise	String [high demand| REAG 1| REAG 2| REAG 3| REAG 4| REAG 5| REAG 6]	REAG 2 high demand
option	The specific frequency blocks for the bidding option	String	BCD
block	The frequency block of the license	Character [A-L]{1}	B
market_number	PEA ID	String ([PEA][0-9] [0-9][0-9]){6}	PEA001
market_name	PEA name	String	"New York, NY"
category	The license category (including whether it would be designated as reserved for the bidding option)	String [C1-R|C1-U|C2]	C1-R
clock_phase_price	The clock phase price	Integer	183800
impairment_percent	The impairment percentage of the license (as a percentage between 0 and 100 to one decimal place)	Decimal	12.1
impairment_discount	The discount to the clock phase price for the license based on the percent of impairment, rounded to the nearest dollar	Integer	22240
impairment_adjusted_price	The clock phase price of the license adjusted for impairment, rounded to the nearest dollar	Integer	161560

4.6 Assignment Phase Results by Option

File name: assignment-bid_options.csv

The Assignment Phase Results by Option file provides the assignment results for all bidders, listing each bidding option that was won by each bidder (its "winning assignment") and its assignment phase payment, if any.

File Structure:

- CSV file (first row contains header)
- One row for each winning assignment

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	String	1002
bidder	Bidder name	String	Company XYZ "ABC, Inc."
frn	The bidder's FCC Registration Number (FRN)	Alpha-numeric {10}	0003645843
round	Round number	Integer	12
region	The REAG associated with the PEA if the PEA is not a high-demand market, and "high demand" otherwise	String [high demand| REAG 1| REAG 2| REAG 3| REAG 4| REAG 5| REAG 6]	REAG 2 high demand
market_number	PEA (Partial Economic Area) ID(s)	String	PEA001 PEA007;PEA009 *Multiple PEAs are separated with semi-colons.*
market_name	PEA name(s)	String	"New York, NY" "Boston, MA;Miami, FL" *Multiple PEAs are separated with semi-colons.*
c1_winnings	The total number of Category 1 blocks that the bidder has in the assignment phase market	Integer	2
c2_winnings	The total number of Category 2 blocks that the bidder has in the assignment phase market	Integer	0
option_assigned	The specific frequency blocks for the winning assignment	String	BCD
impairment_adjusted_price	The total impairment-adjusted clock-phase price for the winning assignment, summed across all licenses in the bidding option	Integer	2960000

Name	Description	Data Type	Example/*Notes*
bid_amount	The bid amount submitted for the bidding option. If the bidder did not submit a bid for the bidding option the value is 0.	Integer	182000
assignment_payment	The assignment phase payment for the winning assignment	Integer	156000
adjusted_gross_payment	The gross payment amount for the winning assignment which is the total impairment-adjusted clock-phase price summed across all licenses in the bidding option plus the assignment phase payment	Integer	3116000

4.7 Assignment Phase Cumulative Results

File name: assignment-cumulative_results.csv

The Assignment Phase Cumulative Results file contains the cumulative payment amounts for each bidder after each round. The file contains three rows for every assignment round, covering (i), total payments for past rounds; (ii), total estimated payments in future rounds; and (iii), the total of (i) and (ii). During the assignment phase, this file provided each bidder a running estimate of its final forward auction payment based on the information known at the time of that assignment round. For bidders with a bidding credit, this file includes additional information about discounts and bidding credit caps known at that point in time. For each bidder, the final round contains it final payment information.

File Structure:

- CSV file (first row contains header)
- For each bidder, three rows providing its payment status as of the completion of an assignment round:
    - The first row, denoted "Adjusted Payment" includes information for all posted assignment rounds, as indicated by the "rounds_completed" field (i.e., all rounds for which the results have been posted);
    - The second row, denoted "Unadjusted Commitment" provides payment estimates for all future assignment rounds (i.e., all rounds after the round indicated by the "rounds_completed" field). Given these rounds have yet to be held, these values are based strictly on the bidder's clock phase winning bid amounts and do not take into account any adjustments as a result of impairments nor any assignment phase payments;
    - The third row, denoted "Total" provides the total of the first and second rows.

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	String	1002 *This will be the same for all records.*
bidder	Bidder name	String	Company XYZ "ABC, Inc." *This will be the same for all records.*
frn	The bidder's FCC Registration Number (FRN)	Alpha-numeric {10}	0003645843 *This will be the same for all records.*
rounds_completed	Round number of the last posted assignment round covered by the data	Integer	12
value_type	Indication whether the row is related to (i) an adjusted payment, (ii) an unadjusted commitment, or (iii) the total of the adjusted payment and unadjusted commitment	String [Adjusted Payment| Unadjusted Commitment| Total]	Adjusted Payment
gross_value	The gross amount (without any bidding credit discounts applied)	Integer	1100000000
discount_capped_all_markets	The discount to the gross amount for all markets taking into account the small market cap (if applicable) and the overall cap	Integer	150000000 *This field is null if the bidder is not eligible for a bidding credit.*
net_value	The net amount (i.e., the gross amount minus the capped discount)	Integer	950000000 *This field is null if the bidder is not eligible for a bidding credit.*
discount_uncapped_all_markets	The discount to the gross amount for all markets without taking into account the small market cap (if applicable) or the overall cap	Integer	165000000 *This field is null if the bidder is not eligible for a bidding credit.*
discount_uncapped_small_markets	The discount to the gross amount for small markets without taking into account the small market cap	Integer	22100000 *This field is null if the bidder is not eligible for the small business bidding credit.*

4.8 Assignment Phase Results by License

File name: assignment-results_by_license.csv

The Assignment Phase Results by License file contains information about each forward auction license won in the auction. For each license won, this file provides information about the license, the bidder that won the license, and the per license gross and net price as calculated by the auction system after the auction.

File Structure:

- CSV file (first row contains header)
- One record for each license won in the forward auction

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	Integer	1002
license	The license identifier is a combination of radio_service_code, market_number, and block each separated by "-"	String {11}	WT-PEA276-G
radio_service_code	The radio service code as set by the FCC	String [WT]	WT
market_number	Partial Economic Area (PEA) ID	String ([PEA][0-9][0-9][0-9]){6}	PEA276
market_name	PEA name	String {0,50}	“Rapid City, SD”
block	The frequency block of the license	Character [A-L]{1}	G
category	Indicates the generic license category ”C1” = License Category 1 “C2” = License Category 2	String ([C1|C2])	C1
reserved_flag	Indicates if the license is reserved (“R”) or unreserved (“U”)	String [U|R]	U
frn	The bidder’s FCC Registration Number (FRN)	Alpha-numeric {10}	0003645843
bidder	Bidder name	String {0,50}	Company XYZ“ABC, Inc.”
bidding_credit_pct	The bidder’s bidding credit percentage. If the bidder did not qualify for a bidding credit this value is set to 0.	Integer [0|15|25]	25
bidding_credit_type	Indicates the type of bidding credit the bidder is eligible for	String [Rural|Small Business|<blank>]	Small Business

Name	Description	Data Type	Example/*Notes*
gross_license_price	The gross license price as calculated by the auction system	Integer	143295818
net_license_price	The net license price as calculated by the auction system	Integer	122756225

4.9 Assignment Phase Unassigned Licenses

File name: assignment-unassigned_licenses.csv

The Assignment Phase Unassigned Licenses file contains information about licenses in the forward auction that were not assigned to a bidder (i.e., licenses still held by the FCC).

File Structure:

- CSV file (first row contains header).
- One record for each license that was not won in the forward auction

Name	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	Integer	1002
license	The license identifier is a combination of radio_service_code, market_number, and block each separated by "-"	String {11}	WT-PEA276-G
radio_service_code	The radio service code as set by the FCC	String [WT]	WT
market_number	Partial Economic Area (PEA) ID	String ([PEA][0-9][0-9][0-9]){6}	PEA276
market_name	PEA name	String {0,50}	“Rapid City, SD”
block	The frequency block of the license	Character [A-L]{1}	G

5 Appendix: Data Type Definitions

The following is a guide to interpreting data types defined in this document. This guide is based on regular expressions used in XML standards.

Valid Data Types used in this Document

Character: A character is a single standard ASCII character. The following list has examples of valid ASCII characters:

- a
- D
- 3
- %

String: A string contains one or more characters and can contain whitespace. The following list has examples of valid strings:

- PEA001
- 005
- 588.3-593.3 MHz + 628.3-633.3 MHz
- Huntsville-Decatur-Florence, AL

Note that strings containing a comma that are included in a CSV formatted file need to include quotation marks around them. In the above example, "Huntsville-Decatur-Florence, AL" would be the correct format for the string in a CSV file.

Numeric: Numeric is a generic data type that covers a number of different underlying data types. As a result, anything defined as numeric could be any of the following:

- Decimal
- Integer
- Long

Integer: The integer data type is used to specify a numeric value without a fractional component.

- It's assumed that any Integers defined in this document are unsigned and never include a (+) plus or (-) minus sign. Any signed Integers containing a + or – are considered invalid.
- If the Integer is of defined length then curly brackets should be used. For example, {3} indicates the integer should be exactly 3 numbers long.

The following list has examples of valid Integers:

- 009
- 9
- 2147483647

The following list has examples of *invalid* Integers:

- -009

- +009

Restricting values for a data type

Restrictions are used to define acceptable values for any given data type. The following lexicon is used when defining data types:

- Square brackets define the *pattern*.
  - e.g., [A-L] means only the uppercase letters A through L are allowed.
  - e.g., [U|D] means only the uppercase letters U or D are allowed.
  - e.g., [0-9] means only the numbers 0 through 9 are allowed
- Curly brackets define the *length* including whitespace.
  - e.g., {3} means the value has to be exactly 3 characters long.
  - e.g., {1,3} means the value has to be a minimum of 1 character and a maximum of 3 characters.
  - e.g., {0,50} means the value has to be a minimum of 0 characters and a maximum of 50 characters.

Example 1:

The Data Type is defined as follows:

Integer
{3}

The curly brackets mean only a 3 digit integer is allowed.

Valid Values for example 1:

- 009
- 056
- 102

Invalid Values for example 1:

- 09
- 3502
- 1
- +12
- -35

Example 2:

The Data Type is defined as follows:

String
[A-L]{1}

The square brackets mean only the uppercase letters A through L are allowed and the curly brackets mean it must be exactly 1 character long.

Valid Values for example 2:

- B
- L

Invalid Values for example 2:

- a
- M
- 6

Example 3:

The Data Type is defined as follows:

String
[0-9]{3}

The square brackets mean only the numbers 0 through 9 are allowed and the curly brackets mean it must be 3 characters long.
Valid Values for example 3:

- 001
- 023
- 358

Invalid Values for example 3:

- 2
- 01
- 2026

Example 4:

The Data Type is defined as follows:

String
[0-9]{1,2}

The square brackets mean only the numbers 0 through 9 are allowed, and the curly brackets mean it must be a minimum of 1 character long and a maximum of 2 characters long.
Valid Values for example 4:

- 4
- 04
- 41

Invalid Values for example 4:

- 123
- Blank or null value

Example 5:

The Data Type is defined as follows:

String
[US|CA|MX]{2}

The square brackets mean the pattern must be either US, CA or MX. The curly brackets mean it must be exactly 2 characters long.

Valid Values for example 5:

- US
- CA

Invalid Values for example 5:

- C
- USA

Example 6:

The Data Type is defined as follows:

String
(["PEA"][0-9] [0-9] [0-9]){6}

The square brackets inside the round brackets mean the pattern must be a concatenation of the text "PEA" followed by three single numbers, with each number ranging from 0 through 9. The curly brackets mean it must be exactly 6 characters long.

Valid Values for example 6:

- PEA002
- PEA356

Invalid Values for example 6:

- PEA0001
- PEA-005
- PEA-05
- PEA-0512
- PEA-2

Example 7:

The Data Type is defined as follows:

String
{0,50}

The absence of square brackets mean there are no restrictions to the characters in this string. The curly brackets mean it must be a minimum of 0 characters long (i.e., can be blank/null) and a maximum of 50 characters long.

Valid Values for example 7:

- 588.3-593.3 MHz + 628.3-633.3 MHz
- Albuquerque-Santa Fe, NM

Invalid Values for example 7:

- Greenville-Spartanburg, SC-Asheville, NC-Anderson, SC
- This is an invalid string which is longer than 50 characters including spaces.