ATTACHMENT 1

FORWARD AUCTION CLOCK PHASE BIDDER DATA FILES

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1. Introduction

This document provides the data file specifications for the bidding related upload and download files that will be available to bidders during the forward auction clock phase. 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.[1] Data type definitions and notation rules are explained in an appendix attached to this document.

In addition to the data file specifications, a sample data file for each file is available on the Auction 1002 website (www.fcc.gov/auctions/1002) under the Data tab.[2] The sample data files show a variety of bidding scenarios over the course of seven rounds. For illustrative purposes only, bids were entered in such a way so that the fourth round was an extended round that met the final stage rule, with sample data for the fifth round therefore reflecting implementation of the market-based spectrum reserve and the split of Category 1 blocks into reserved and unreserved blocks. In the sixth round, the bidder in the sample data did not place any bids. In the seventh round, bids were placed in such a way that the clock phase ends at the conclusion of the round. Sample download files related to a new stage are also provided for the same bidder in a new stage where, in a different scenario, the final stage rule was not met, and the clearing target has been reduced by two blocks. We emphasize that the scenarios and bidding examples provided are not meant to reflect any predictions or assumptions by the Commission regarding bidding activity, the number of rounds, or the outcome of the incentive auction.

2. Bidder Download Files

This section provides the specifications of the bidding related download files available to bidders during the forward clock phase. It also includes the specifications for three additional files that will be provided at the beginning of each additional stage of the forward clock phase.

2.1. My Bidder Markets

File name: my_bidder_markets-stage#.csv

The My Bidder Markets file provides information about each product (PEA and license category combinations) available in the forward auction. It indicates whether a bidder is eligible to bid on the product based on the PEAs selected on its Form 175 application. It also indicates if the bidder is eligible to bid on reserve spectrum in that PEA.

File Structure:

- CSV file (first row contains header).
- One record for each product available in the forward auction.

[1] We note that the terminology used in this Public Notice is defined in the technical appendices to the *Auction 1000 Application Procedures Public Notice*. *See Application Procedures for Broadcast Incentive Auction Scheduled to Begin on March 29, 2016; Technical Formulas for Competitive Bidding*, AU Docket No. 14-252, GN Docket No. 12-268, WT Docket No. 12-269, Public Notice, DA 15-1183 (WTB rel. Oct. 15, 2015) (*Auction 1000 Application Procedures Public Notice*).

[2] The Auction 1002 website provides a single ZIP file containing the individual CSV files. The Auction System provides each of the CSV files separately.

Field	Description	Data Type	Examples/*Notes*
auction_id	The FCC auction number for the forward auction.	String	1002
market_number	The PEA (Partial Economic Area) ID	String (["PEA"][0-9] [0-9][0-9]){6}	PEA001
market_name	The PEA name	String	"New York, NY"
bidder	Bidder name	String	Company XYZ "ABC, Inc."
frn	The bidder's FCC Registration Number (FRN) which uniquely identifies a bidder.	Alpha-numeric {10}	0003645843
selected_market	Indicates if the bidder selected the PEA on its application form.	Character [Y|N]{1}	Y
reserve_eligible	Indicates if the bidder is eligible to bid on reserve blocks in the PEA.	Character [Y|N]{1}	Y

2.2. Sample Bids File

File name: sample_bids_file.csv

The Sample Bids file provides a sample template for a bidder that wants to upload its bids in the first round of the initial stage of the auction. For each product (PEA and license category) it wishes to bid on, the bidder indicates the desired quantity of blocks. This file is available only in the first round of the initial stage of the auction.

File Structure:

- CSV file (first row contains header).
- One record for each product the bidder is eligible to bid on in the forward auction.

Field	Description	Data Type	Examples/*Notes*
market_number	The PEA (Partial Economic Area) ID	String (["PEA"][0-9] [0-9][0-9]){6}	PEA001
market_name	The PEA name	String	"New York, NY"
category	License category	String [C1|C1-R|C1-U|C2] {4}	C1
bidding_units	Number of bidding units associated with the product	Integer	2300
supply	The supply of blocks associated with the product	Integer	8

Field	Description	Data Type	Examples/*Notes*
quantity	Number of blocks requested	Integer	0 *The bidder must input its desired quantity before uploading the file.*

2.3. My Bids

File name: my_bids-stage#.csv

The My Bids file provides a list of all the bids considered by the Auction System for a bidder in a round, including bids that were submitted so far in an open round. Each bid pertains to a specific product (PEA and license category combination) being offered in the forward auction. Note that the file does not contain bids that were submitted and subsequently modified within the same round, rather the file contains the list of bids the Auction System is currently considering or did consider for that bidder in the associated round.

In addition to providing information about the bid and the authorized bidder who submitted the bid, the file provides information about the associated product in that round 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).
- The file contains one record per round and bid combination.
- After the results of a round have been posted, this file may also contain missing bids submitted by the Auction System. A missing bid is a simple bid for a quantity of 0 at the lowest possible price for the product in that round.
- The file contains cumulative data for all past rounds and the current round.
- The file contain 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.
- In an extended round, the file will contain a record for all products with processed demand from the previous round that are not biddable in the extended round. For non-biddable products a bid is automatically considered that maintains the bidder's processed demand and posted price from the previous round.

Field	Description	Data Type	Examples/*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	The PEA (Partial Economic Area) ID	String (["PEA"][0-9] [0-9][0-9]){6}	PEA001

Field	Description	Data Type	Examples/*Notes*
market_name	The PEA name	String	"New York, NY"
category	License category	String [C1|C1-R|C1-U|C2]	C1
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) which uniquely identifies a bidder	Alpha-numeric {10}	0003645843
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 for each block	Integer	125000 *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] {4}	C1-U *NULL for Simple, AON, AON+ bid types, and the "from" product of a switch bid.*

Field	Description	Data Type	Examples/*Notes*
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] {4}	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.*
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 associated 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 associated product in the round.	Integer	12650000
entered_by	Name of authorized bidder or telephonic bid assistant who submitted the bid, or "System" if the Auction System submitted a missing bid.	String	Karen Smith Telephonic Bid Assistant System
entered_time	The time the bid was submitted.	String MM/DD/YY HH:MM:SS AM/PM ET	12/04/15 03:21:47 PM ET
selection_number	The pseudo-random number associated with the bid used for tie-breaking purposes.	Integer {15}	123456789012345 *This field is NULL until the round data is posted.* *This field is NULL in round 1 of the initial stage.*

2.4. My Results

File name: my_results-stage#.csv

The My Results file provides a list of the results of bid processing for a bidder in a given round for all products (PEA and license category combinations) in which the bidder had processed demand in the previous round. For each product the file gives the processed demand, posted price and the aggregate demand. Additionally, if a bid was not fully accepted, the file provides an indication of such and details about why one or more bids for the product were not accepted. The data pertaining to bidding results for a round is available in the file once the round results have been posted.

File Structure:

- CSV file (first row contains header).
- One record for each round and product combination where the bidder had processed demand for the product in the previous round.
- The file contains cumulative data for all past rounds.
- In an extended round, the file will contain a record for all products with processed demand at the start of the round that are not biddable in the extended round. For non-biddable products a bid is automatically considered that maintains the bidder's processed demand and posted price from the previous round.

Field	Description	Data Type	Examples/*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	The PEA (Partial Economic Area) ID	String (["PEA"][0-9] [0-9][0-9]){6}	PEA001
market_name	The PEA name	String	"New York, NY"
category	License category	String [C1|C1-R|C1-U|C2] {4}	C1
bidder	Bidder name	String	Company XYZ "ABC, Inc."
frn	The bidder's FCC Registration Number (FRN) which uniquely identifies a bidder	Alpha-numeric {10}	0003645843
processed_demand	The bidder's demand for the product after processing.	Integer	2
processed_demand_flag	Indication if all bids for the product were fully processed.	Character [Y|N] {1}	Y

Field	Description	Data Type	Examples/*Notes*
processed_demand_detail	Details about why one or more bids for the product were not accepted or not fully accepted during bid processing.	String {500}	"Simple bid to increase demand to 11 @ $147,000,555; 2 blocks were not applied due to insufficient eligibility." "AON bid to decrease demand to 0 @ $36,600,222; 3 blocks were 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.* *NULL if all bid(s) for the product were fully accepted.*
aggregate_demand	The aggregate demand for the product after processing.	Integer	15
posted_price	The posted price for the product after processing.	Integer	12650000

2.5. My Product Status

File name: my_product_status-stage#.csv

The My Product Status file provides the status of each product (PEA and license category combination) after bid processing in a round. 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.

The data pertaining to bidding results for a round is available in the file once the round results have been posted. Information pertaining to next round clock prices is available in the file once the information for the next round has been updated in the Auction System (usually at the same time or very soon after the results have been posted).

File Structure:

- CSV file (first row contains header).
- One record for each round and product combination where the bidder is eligible to bid on the product based on the PEAs it selected on its Form175.
- The file contains cumulative data for all past rounds.

Field	Description	Data Type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	String	1002
stage	Stage number	Integer {1,3}	1
round	Round number	Integer	12
market_number	The PEA (Partial Economic Area) ID	String (["PEA"][0-9] [0-9][0-9]){6}	PEA001
market_name	The PEA name	String	"New York, NY"
category	License category	String [C1|C1-R|C1-U|C2] {4}	C1
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 *NULL if the next round has not yet been announced.*
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*

2.6. My Bidder Status

File name: my_bidder_status-stage#.csv

The My Bidder Status file provides information related to a bidder for a round. For each round 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.

The data pertaining to the bidder's results for a round is available in the file once the round results have been posted. Information pertaining to next round eligibility and required activity is available in the file once the information for the next round has been updated in the Auction System (usually at the same time or very soon after the results have been posted).

File Structure:

- CSV file (first row contains header).
- One record for each round
- The file contains cumulative data for all past rounds.

Field	**Description**	**Data Type**	**Examples/*Notes***
auction_id	The FCC auction number for the forward auction.	String	1002
stage	Stage number	Integer {1,3}	1
round	Round number	Integer	12
bidder	Bidder name	String	Company XYZ "ABC, Inc."
frn	The bidder's FCC Registration Number (FRN) which uniquely identifies a bidder.	Alpha-numeric {10}	0003645843
bidding_credit_pct	The bidding credit percentage associated with the bidder	Integer	15 *0 = no bidding credit* *15 = 15% bidding credit*
bidding_credit_type	Indicates the type of bidding credit that the bidder is eligible to receive.	String [Rural | Small Business]	Small Business *Rural = bidder is eligible for the rural service provider bidding credit* *Small Business = bidder is eligible for the 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

Field	Description	Data Type	Examples/*Notes*
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
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 discount in dollars for the round in the small markets based on any bidding credits without applying any applicable bidding credit caps.	Integer	11000000 *Contains a value if the bidder is eligible for the small business bidding credit, NULL otherwise.*
processed_activity	The bidder's bidding activity in bidding units after processing.	Integer	4100000 *NULL if the round results have not yet been posted.*
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.*

Field	Description	Data Type	Examples/*Notes*
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 discount in dollars for the round in the small markets based on any bidding credits without applying any applicable bidding credit caps.	Integer	11900000 *Contains a value if the bidder is eligible for the 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 *NULL if the next round has not been announced.*
next_round_required_activity	The bidder's required activity in bidding units for the next round.	Integer	4100000 *NULL if the next round has not been announced.*

2.7. My Split Transition

File name: my_split_transition-stage#.csv

The My Split Transition file provides a bidder with 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 into reserved and unreserved blocks by PEA — as well as 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 product after the split, this file also provides detailed information about why. This file will be available after the round in which processing determined that the final stage rule was met, triggering the split.

File Structure:

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

Field	Description	Data Type	Examples/*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

Field	Description	Data Type	Examples/*Notes*
market_number	The PEA (Partial Economic Area) ID	String (["PEA"][0-9] [0-9][0-9]){6}	PEA001
market_name	The PEA name	String	"New York, NY"
bidder	Bidder name	String	Company XYZ "ABC, Inc."
frn	The bidder's FCC Registration Number (FRN) which uniquely identifies a bidder.	Alpha-numeric {10}	0003645843
reserve_eligible	Indicates if the bidder is eligible to bid on reserve blocks in the PEA.	Character [Y|N]{1}	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

Field	Description	Data Type	Examples/*Notes*
split_selection_number	The pseudo-random number used for tie-breaking purposes that is assigned to the bidder for the PEA.	Integer {10}	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 accepted or fully accepted 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." "Your processed demand for C1-U (1) was reduced to the supply of C1-U (0)." *NULL if there are no applicable details.*

2.8. My Stage Transition

File name: my_stage_transition-stage#.csv

The My Stage Transition file provides a bidder with information about the change in aggregate demand and supply of products (PEA and license category combinations) from the previous stage after the auction transitions to a new stage. The file also provides a bidder with information about the change in its processed demand for those products. This file will be available at the beginning of a new stage.

File Structure:

- CSV file (first row contains header).
- One record for each stage and product combination where the bidder is eligible to bid on the product.

Field	Description	Data type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	String	1002
stage	Stage number	Integer	1
market_number	The PEA (Partial Economic Area) ID	String (["PEA"][0-9] [0-9][0-9]){6}	PEA001

Field	Description	Data type	Example/*Notes*
market_name	The 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) which uniquely identifies a bidder.	Alpha-numeric {10}	0003645843
supply	The supply of blocks in the product and stage.	Integer	8
aggregate_demand	The aggregate demand for the product and stage.	Integer	15
processed_demand	The bidder's processed demand for the product and stage.	Integer	4

2.9. Block Transition

File name: block_transition -stage#.csv

The Block Transition file provides a bidder with information about the change in blocks from the previous stage after the auction transitions to a new stage. The block letter and associated frequencies for the band plan from the previous stage and the current stage are listed. This file will be available at the beginning of a new stage.

File Structure:

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

Field	Description	Data type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	String	1002
stage	Stage number	Integer	1
supply	The maximum supply of blocks in the band plan for the stage.	Integer	8
description_a	Frequency range for block A	String {0,50}	558-563 MHz + 640-645 MHz *NULL if this block is not being offered*
description_b	Frequency range for block B	String {0,50}	563-568 MHz + 645-650 MHz *NULL if this block is not being offered*
description_c	Frequency range for block C	String {0,50}	568-573 MHz + 650-655 MHz *NULL if this block is not being offered*

Field	Description	Data type	Example/*Notes*
description_d	Frequency range for block D	String {0,50}	573-578 MHz + 655-660 MHz *NULL if this block is not being offered*
description_e	Frequency range for block E	String {0,50}	578-583 MHz + 660-665 MHz *NULL if this block is not being offered*
description_f	Frequency range for block F	String {0,50}	583-588 MHz + 665-670 MHz *NULL if this block is not being offered*
description_g	Frequency range for block G	String {0,50}	588-593 MHz + 670-675 MHz *NULL if this block is not being offered*
description_h	Frequency range for block H	String {0,50}	593-598 MHz + 675-680 MHz *NULL if this block is not being offered*
description_i	Frequency range for block I	String {0,50}	598-603 MHz + 680-685 MHz *NULL if this block is not being offered*
description_j	Frequency range for block J	String {0,50}	603-608 MHz + 685-690 MHz *NULL if this block is not being offered*
description_k	Frequency range for block K	String {0,50}	619-624 MHz + 690-695 MHz *NULL if this block is not being offered*
description_l	Frequency range for block L	String {0,50}	624-629 MHz + 695-700 MHz *NULL if this block is not being offered*

2.10. Market-Block Transition

File name: market_block_transition-stage#.csv

The Market-Block Transition file provides a bidder with information about the change in impairment levels from the previous stage in each block of each PEA after the auction transitions to a new stage. The percent of impairment for each PEA-block combination from the previous stage and the current stage are listed. This file will be available at the beginning of a new stage.

File Structure:

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

Field	Description	Data type	Example/*Notes*

Field	Description	Data type	Example/*Notes*
auction_id	The FCC auction number for the forward auction	String	1002
stage	Stage number	Integer	1
market_number	The PEA (Partial Economic Area) ID	String (["PEA"][0-9] [0-9][0-9]){6}	PEA001
market_name	The PEA name	String	"New York, NY"
block	The block identifier	Character [A-L]{1}	A
category	License category	Character [C1|C2]{2}	C1
percent_impaired	The percent of population in the PEA with predicted impairment.	Decimal [0.0-100.0]	11.2

3. Bidder Upload File

During the first round of the initial stage of the auction when a bidder must input its initial demand for products, the bidder may utilize a bid upload feature in the Auction System. A sample template is provided to the bidder as a download (see *Sample Bids File* in the Bidder Downloads section). A bidder may simply download a sample file, enter the quantities requested for each product, and upload the file to the Auction System. The sample bids file contains all the products that the bidder is eligible to bid on. If a bidder does not want to bid on one of their eligible products it many either omit it from the file or enter a quantity of 0 for that product.

File Requirements:

- The upload file must be in CSV format. A particular file name is not required.
- The following fields are required, all others will be ignored:
  - PEA number (column header "market_number")
  - License category (column header "category")
  - Quantity (column header "quantity")
- A bid upload file will be rejected in its entirety if any of the following conditions occur:
  - A bid was submitted for an invalid product (a PEA-license category combination that is not available in the forward auction)
  - A bid was submitted for a product that is not on the bidder's Form 175
  - A bid was submitted for a product with a quantity that is not a whole number greater than or equal to 0 and less than or equal to the supply of the product
  - The sum of the bidding units for the quantities bid exceed the bidder's eligibility

Field	Description	Data Type	Examples/*Notes*
market_number	The PEA (Partial Economic Area) ID	String (["PEA"][0-9] [0-9][0-9]){6}	PEA001

Field	Description	Data Type	Examples/*Notes*
market_name	The PEA name	String	"New York, NY" *This field is optional.*
category	License category	String [C1|C1-R|C1-U|C2] {4}	C1
bidding_units	Number of bidding units associated with the product	Integer	2300 *This field is optional.*
supply	The supply of blocks associated with the product	Integer	8 *This field is optional.*
quantity	Number of blocks requested	Integer	2

4. 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. E.g., {3} indicates the integer should be exactly 3 numbers long.
- The maximum value of an unsigned Integer is 2^{64}-1 which is 4294967295

The following list has examples of valid Integers:

- 009
- 9
- 2147483647

The following list has examples of *invalid* Integers:

- -009

- +009
- 2147483648 (i.e. too large)

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.