ATCLab Release Notes

ATCLab Release Notes (Default Branch)

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Version: 2.8.14

Developer: Aaron Yeung (aaron.c.yeung@gmail.com)

Release Date: Friday 24th May 2019

Notes:

- Added automation on/off label under in-trial clock display. New XMLs are displayed in the table below:

XML Element	Parent Element	Description	Example
<atc:automation>	<atc:info_block>	Displays the in-trial automation mode (on/off) under the clock label.	<atc:info_block atc:position='TOPLEFT'> <atc:time atc:type='countDown' atc:source='blockTrial'/> <atc:automation/> </atc:info_block>

- Added automation mode that determines if conflict/non-conflict recommendations are displayed on aircraft. This sets the automation on/off label value in the info_block (see above). New XMLs are displayed in the table below:

XML Element	Parent Element	Description	Values	Example
<atc:automation>	<atc:param>	Sets the automation mode of the trial which determines if scripted conflict/non-conflict recommendations are displayed for each aircraft.	true – enable automation false – disable automation	<atc:param atc:idx='default'> <atc:update_rate>20</atc:update_rate> <atc:automation>true</atc:automation> … </atc:param>

- Added ability for experimenter to script conflict/non-conflict recommendation for each individual aircraft if the trial is running in automation mode (see above). New XMLs are displayed in the table below:

XML Element	Parent Element	Description	Values	Example
<atc:autorecommendation>	<atc:aircraft >	Sets a text string as a recommendation for individual aircraft which will be displayed under the altitude and velocity labels	[Text]	<atc:aircraft atc:type='B737' atc:idx='LAT860'> … <atc:flightpath><atc:point atc:x='77.599' atc:y='80.588'> <atc:altitude>37000</atc:altitude></atc:point>

				<atc:point atc:x='90' atc:y='56.25'> <atc:altitude>37000</atc:altitude></atc:point> <atc:point atc:x='138.183' atc:y='-38.315'> <atc:altitude>37000</atc:altitude></atc:point> </atc:flightpath> <atc:autorecommendation>NON-CONF</atc:autorecommendation> </atc:aircraft>

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Version: 2.8.13

Developer: Aaron Yeung (aaron.c.yeung@gmail.com)

Release Date: Sunday 12th June 2016

Notes:

- Modified the logging of each entry in the output file to include milliseconds.

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Version: 2.8.12

Developer: Aaron Yeung (aaron.c.yeung@gmail.com)

Release Date: Tuesday 8th March 2016

Notes:

- Modified the final trial in a block trial that has to wait for the block trial countdown timer to complete to only score conflict declarations once.

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Version: 2.8.11

Developer: Aaron Yeung (aaron.c.yeung@gmail.com)

Release Date: Monday 7th March 2016

Notes:

- Added a configuration to <atc:block_trial> to allow an experimenter to set whether to end the last trial task in a block trial when a participant makes a conflict declaration or to hide the aircraft and only end the last trial when the block trial countdown completes.

XML Attribute	Parent Element	Description	Values	Example
<atc:waitTimeOut>	<atc: block_trial>	A configuration to allow the last trial task in a block trial to wait for the block trial countdown to complete before ending the trial even if the participant has made a conflict declaration	true – wait until block trial countdown completes false – don't wait for block trial countdown to complete. End the last trial if the participant responds with a conflict declaration	<atc:block_trial **atc:waitTimeOut**='true' > <atc:trial atc:idx='cond_D_PM_trial_1-1' atc:sky='sky41_PM' atc:param='default' atc:map='map41' atc:ui='ui01'> <atc:keyEvent atc:type='terminateTrial'>q</atc:keyEvent> </atc:trial>

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Version: 2.8.10

Developer: Aaron Yeung (aaron.c.yeung@gmail.com)

Release Date: Tuesday 1st March 2016

Notes:

- Added a 'other conflict' type event (a third conflict declaration type to conflict and non-conflicts)
- Added associated scoring for 'other conflict' events (correctly actioned, false alarm and missed other conflict events)
- Added a check for the scoring object to detect missed other conflict events at the end of a trial task
- Fixed bug where the first trial task mistakenly gets checked for missed non conflicts and generates an incorrect score
- Added an XML element for scoring for missed other conflict events

XML Element	Parent Element	Description	Attributes	Description	Values	Example
<atc:miss_other_conflict>	<atc: scoring>	Score settings for the scenario where an aircraft pair of type 'other conflict' doesn't get actioned by the participant	atc:value atc:audio atc:duration atc:delay	Value of the score in this scenario Name of audio file to play Duration to play audio Delay in seconds to play audio	[Number] [Text] [Number] [Number]	<atc:scoring> <atc:miss_other_conflict atc:value='-20' atc:audio='' atc:duration='0' atc:delay='0'/> </atc:scoring>

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Version: 2.8.9

Developer: Aaron Yeung (aaron.c.yeung@gmail.com)

Release Date: Monday 29th February 2016

Notes:

- Fixed <atc:initial_tools>/<atc:srprobe_tool>. This now allows an experimenter to set the short route probe tool to be on for all aircraft by default.

XML Element	Parent Element	Description	Attributes	Description	Values	Example
<atc: srprobe_tool>	<atc: initial_tools>	Allows an experimenter to set the short route probe tool to be on by default for all aircraft in a trial.	atc:toggle	Toggles the length of the short route probe tool.	1 = 1 minute 2 = 2 minutes 3 = 3 minutes 4 = 5 minutes 5 = 10 minutes 6 = 15 minutes	<atc:initial_tools> <atc:srprobe_tool atc:toggle='1'/> </atc:initial_tools>

- Included scoring for child trial tasks in block trials that don't get run due to the block trial timing out. Prior to version 2.8.9, if only the first trial in a block trial times is run before the block trial times out, the output would be like the following:

  …<type>trial</type><task_id>block1_trial1</task_id></info>
  …<call>aircraft1</call>…
  …<call>aircraft2</call>…
  …<info><block_trial>timeout</block_trial></info>
  …<info><score>0</score><total_score>0</total_score><grand_total_score>0</grand_total_score><event>MISS_CONFLICT</event>
  …<correct_decisions>0</correct_decisions><goal>0</goal><success>false</success><goal_score>0</goal_score><total_score>0</total_score>
  ...<type>trial</type><task_id>block1_trial2</task_id></info>
  ...<type>trial</type><task_id>block1_trial2</task_id></info>
  ...<type>trial</type><task_id>block1_trial3</task_id></info>
  ...<type>trial</type><task_id>block1_trial4</task_id></info>

  The new log will appear like the following:

  …<type>trial</type><task_id>block1_trial1</task_id></info>
  …<call>aircraft1</call>…
  …<call>aircraft2</call>…
  …<info><block_trial>timeout</block_trial></info>
  …<info><score>0</score><total_score>0</total_score><grand_total_score>0</grand_total_score><event>MISS_CONFLICT</event>
  …<correct_decisions>0</correct_decisions><goal>0</goal><success>false</success><goal_score>0</goal_score><total_score>0</total_score>
  ...<type>trial</type><task_id>block1_trial2</task_id></info>
  …<info><score>0</score><total_score>0</total_score><grand_total_score>0</grand_total_score><event>MISS_CONFLICT</event>
  …<correct_decisions>0</correct_decisions><goal>0</goal><success>false</success><goal_score>0</goal_score><total_score>0</total_score>
  ...<type>trial</type><task_id>block1_trial2</task_id></info>
  …<info><score>0</score><total_score>0</total_score><grand_total_score>0</grand_total_score><event>MISS_CONFLICT</event>
  …<correct_decisions>0</correct_decisions><goal>0</goal><success>false</success><goal_score>0</goal_score><total_score>0</total_score>

...<type>trial</type><task_id>block1_trial3</task_id></info>
…<info><score>0</score><total_score>0</total_score><grand_total_score>0</grand_total_score><event>MISS_CONFLICT</event>
…<correct_decisions>0</correct_decisions><goal>0</goal><success>false</success><goal_score>0</goal_score><total_score>0</total_score>
...<type>trial</type><task_id>block1_trial4</task_id></info>
…<info><score>0</score><total_score>0</total_score><grand_total_score>0</grand_total_score><event>MISS_CONFLICT</event>
…<correct_decisions>0</correct_decisions><goal>0</goal><success>false</success><goal_score>0</goal_score><total_score>0</total_score>

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Version: 2.8.8

Developer: Aaron Yeung (aaron.c.yeung@gmail.com)

Release Date: Monday 9th November 2015

Notes:

- Added scoring to conflict declarations using key presses.
- Modified key-based conflict declaration to use the existing conflictDeclarationActions XML structure. The following XML elements are now obsolete:

Obsolete Attribute	Parent Element	Description
<atc:type>	<atc:keyEvent>	registerConflictEvent, registerNonConflictEvent and registerOtherEvent are no longer supported as an 'atc:type' attribute for <atc:keyEvent> for a trial

- Registering conflict, non-conflict and other events are now scripted into the <atc:conflictDeclarationActions> XML element as described in the table below:

New/Modified Element	Parent Element	Description	Attributes	Description	Values	Example
<atc:conflict_key> <atc:non_conflict_key> <atc:other_key>	<atc:conflictDeclarationActions>	Allows an experimenter to assign a keyboard key to allow a participant to register a conflict, non-conflict or other event				<atc:param atc:idx="default"> <atc:conflictDeclarationActions atc:score_change='true' atc:end_trial='true'> <atc:conflict_key>c</atc:conflict_key> <atc:non_conflict_key>n</atc:non_conflict_key> <atc:other_key>o</atc:other_key> </atc:conflictDeclarationActions>

- Added additional scoring events for other event declarations

New/Modified Element	Parent Element	Description	Attributes	Description	Example
<atc:hit_other_ontime> <atc:false_alarm_other	<atc:scoring>	<atc:hit_other_ontime> and <atc:false_alarm_other> allows an experimenter to set the score, audio file to be played, audio duration and audio delay when a participant correctly and incorrectly declares an 'other' event respectively	<atc:value> <atc:audio> <atc:duration> <atc:delay>	Value of score to be assigned to the event Filename and path of audio file to be played when the scoring event is triggered Duration in seconds for the audio file to be played when the audio event is triggered. Delay in seconds before the audio is played after the scoring event is trigerred.	<atc:scoring> <atc:initial atc:value='0'/> <atc:hit_conflict_ontime atc:value='1' atc:audio='' atc:duration='0' atc:delay='0'/> <atc:hit_non_conflict atc:value='2' atc:audio='' atc:duration='0' atc:delay='0'/> <atc:hit_other_ontime atc:value='3' atc:audio='' atc:duration='0' atc:delay='0'/> <atc:false_alarm_conflict atc:value='-1' atc:audio='' atc:duration='0' atc:delay='0'/> <atc:false_alarm_non_conflict atc:value='-2' atc:audio='' atc:duration='0' atc:delay='0'/> <atc:false_alarm_other atc:value='-3' atc:audio='' atc:duration='0' atc:delay='0'/> </atc:scoring>

- Added 'other' type of conflict in the <atc:aircraftstatus> XML element to allow for 'other' events associated with an aircraft pair.

New/Modified Attribute	Parent Element	Description	Values	Example
<atc:status>	<atc:aircraftstatus>	Added a value for 'other' aircraft event types	conflict nonconflict other	<atc:sky> … <atc:aircraftstatus> <atc:aircraft>SXR992</atc:aircraft> <atc:aircraft>NZF711</atc:aircraft> <atc:status>other</atc:status> <atc:finaltime>100</atc:finaltime> </atc:aircraftstatus> </atc:sky>

- Added a grand total score to the scoring module to store accumulated scores for the entire experiment. The new log entry uses the <grand_total_score> XML element as detailed in the table below.

XML Log	Description	Example
<grand_total_score>	Indicates the cumulative score for all trials	<time>Sun 8. Nov 22:01:10 2015</time><info><score>1</score><total_score>1</total_score><grand_total_score>1</grand_total_score><sound></sound><event>HIT_CONFLICT_ONTIME</event><elapsed>2</elapsed></info>

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Version: 2.8.7

Developer: Aaron Yeung (aaron.c.yeung@gmail.com)

Release Date: Monday 28th September 2015

Notes:

- Fixed bug where the in-trial clock will count down incorrectly when using the 'countDown' setting for the <atc:info_block><atc:time> specification. The initial countdown value was set incorrectly after the first trial in a series of trials within a block trial causing the clock to count from an incorrect value often resulting in negative numbers.

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Version: 2.8.6

Developer: Aaron Yeung (aaron.c.yeung@gmail.com)

Release Date: Monday 7th September 2015

Notes:

- Added <atc:block_trial> XML element as a child element of <atc:phase>. This specifies a group of trials tasks to be run together as a single master trial (e.g. with a common clock that sets the duration of a block of trials as opposed to individual trials). XML elements of type <atc:trial> can be specified as child elements of <atc:block_trial>. Additionally, a child XML element <atc:timeEvent> can be used to specify the duration of the entire block of trials. Note: the block trial may be longer or shorter in duration than the set of trials which it contains. If the block trial is longer in duration than its child trials, the block trial will end when the last trial ends. If the block trial is shorter in duration than its child trials, the current trial will end and subsequent trials within the block will not be presented.
- Added an attribute <atc:source> to the <atc:time> XML element to allow an experimenter to specify the time source used to update the clock display within trials. A value of 'trial' indicates the in-trial clock will display the trial time of the individual trial. A value of 'blockTrial' indicates the in-trial clock of trials within a block will display the block trial time (i.e. the clock will not reset back to 00:00:00 when each new trial within a block starts).

New/Modified Element	Parent Element	Description	Attributes	Description	Values	Example
<atc:block_trial>	<atc:phase>	Indicates a block of trials will be presented as a single trial				<atc:block_trial> <atc:trial atc:idx='trial3' atc:sky='sky3' atc:param='default' atc:map='map3' atc:ui='ui01'> <atc:timeEvent>60</atc:timeEvent> </atc:trial> <atc:timeEvent atc:timeUnit='milliSeconds'>60000</atc:timeEvent> </atc:block_trial>
<atc:timeEvent >	<atc:block_trial>	Specifies the duration which a block of trials should run for.	atc:timeUnit	Time unit that the XML element represents (seconds/milliseconds)	seconds milliSeconds	
<atc:time>	<atc:info_block>		atc:source	Specifies the source of the time that is displayed in the clock display during a trial. (block of trials, individual trial)	trial blockTrial	<atc:info_block atc:position="TOPLEFT"> <atc:time atc:type='countUp' atc:source='blockTrial'/> </atc:info_block>

- Added the following logging for block_trials

XML Log	Description	Example
<type>block_trial</type>	Indicates the start of a block trial	<time>Sun 6. Sep 19:48:18 2015</time><info><phase>expTrial2</phase><type>block_trial</type><task_id></task_id></info
<block_trial>timeout</block_trial>	Indicates that a block trial timed out	<time>Sun 6. Sep 19:48:18 2015</time><info><block_trial>timeout</block_trial></info

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Version: 2.8.5

Developer: Aaron Yeung (aaron.c.yeung@gmail.com)

Release Date: Tuesday 18th August 2015

Notes:

- Modified trial task to handle conflict/non-conflict/other event detection with keypress input without requiring a choice_question component. Trial task generates a new output into the log file to indicate what event was recognized by the participant as well as what key was pressed.

New/Modified Element	Parent Element	Description	Values	Example
<registerTrialTaskKeyEvent>	<info>	Indicates the event type the participant was registering	REGISTER_CONFLICT_EVENT REGISTER_NON_CONFLICT_EVENT REGISTER_OTHER_EVENT	<info><elapsed>13030</elapsed><registerTrialTaskKeyEvent>REGISTER_OTHER_EVENT</registerTrialTaskKeyEvent><KEY_PRESS>C</KEY_PRESS>
<KEY_PRESS>	<info>	Specifies the key used to register a particular event	*[Keyboard key pressed]*	

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Version: 2.8.4

Developer: Aaron Yeung (aaron.c.yeung@gmail.com)

Release Date: Sunday 16th August 2015

Notes:

- Added an optional attribute for the atc:timeEvent element called atc:timeUnit which allows a trial task duration to be specified in seconds or milliseconds.

New/Modified Element	Parent Element	Description	New/Modified Attributes	Attribute Values	Description	Example
<atc: timeEvent >	<atc:trial>	Specifies a trial task's duration	atc:timeUnit	seconds milliSeconds	Allows a trial tasks duration to be specified in seconds or milliseconds	<atc:phase atc:idx='expTrial1'> <atc:instruction atc:idxref='interTrialInfo'/> <atc:trial atc:idx='trial1' atc:sky='sky1' atc:param='default' atc:map='map1' atc:ui='ui01'> <atc:keyEvent>x</atc:keyEvent> <atc:timeEvent atc:timeUnit='milliSeconds'>40000</atc:timeEvent></atc:trial> </atc:phase>

- Added an optional attribute for the atc:time element called atc:type which allows a trial task onscreen clock to count forward or backwards in time.

New/Modified Element	Parent Element	Description	New/Modified Attributes	Attribute Values	Description	Example
<atc: time >	<atc:info_block>	Specifies a clock to be displayed during a trial	atc:type	countUp countDown	Allows the onscreen clock in a trial to count forwards or backwards in time	<atc:info_block atc:position="TOPLEFT"> <atc:time atc:type='countDown'/> </atc:info_block>

- Added an optional attribute for the atc:choice element called atc:key which allows a keyboard key to be used to provide a response to the scripted question.

New/Modified Element	Parent Element	Description	New/Modified Attributes	Attribute Values	Description	Example
<atc: choice >	<atc:choice_question>	Specifies the details of a choice (button click or key press) to a question	atc:key	*[Any keyboard alpha-numeric character]*	Allows a keyboard key to be used to provide a response to the scripted question	<atc:choice_question atc:idx='conflictDecision'> <atc:text>Will this pair of aircraft be in conflict?</atc:text> <atc:choice atc:value='1' atc:key='c'>Conflict</atc:choice> <atc:choice atc:value='2' atc:key='n'>No Conflict</atc:choice> <atc:choice atc:value='3'>PM</atc:choice> </atc:choice_question

- Added logging for the additional atc:key option for the atc:choice element if a key is used to provide an answer to a scripted question.

New/Modified Element	Parent Element	Description	Preceding Elements	Example
<KEY_PRESS>	<info>	Specifies the key used to provide an answer to a scripted question	<question::setAnswer>	<time>Sat 15. Aug 16:57:36 2015</time><info><elapsed>3211</elapsed><qestion::setAnswer>2</qestion::setAnswer><KEY_PRESS>N</KEY_PRESS></info>

- Modified trial tasks to handle scripted key events so that the trial can terminate even if it is not in focus (e.g. when a floating dialog box is in focus).