ut_console

User Manual

Contents

Introduction

This Mod is aimed at Mod Developers to Test functionality and confirm values that usually need a Script change or a dedicated script to get. Additionally it might turn out to also be a useful Cheat Mod, but that is not the primary goal, so be careful when used as such. This Mod is versatile and powerful, and can mess up many things in a Savegame.

Enabling the Chatwindow / Console

The Chatwindow/Console is usually not bound to any Key, So you first have to assign one to it.
You can find it under

Settings => Controls => General Controls => Toggle Chat Window (7th from the bottom)
(Note to self: check what „Focus Chat Window Input“ does – 6th from bottom)

Usually the [^] Key is used for that purpose.

Egosofts official Chatwindow Commands

Just as side note there are some useful Commands by Egosoft you can Input here too:

/refreshmd	Reloads the MD Scripts
/refreshai	Reloads the AI Scripts
/reloadui	Reloads the UI / lua scripts
/exportlogbook <filename>	Save logbook as file in personal folder (must have .txt ending)
/thereshallbewings	Unlocks the advanced behavior tab (you only need to do this once on each Computer)

/aicompat check	Check AI script compatibility using in-game aicompat.xml
/aicompat pcheck	Check AI script compatibility using personal aicompat.xml
/aicompat check	Generate new aicompat.xml in personal folder

Less relevant Commands for Modding, but might still be relevant:

/chat|c <message>	Send chat message (no online feature using that yet)
/whisper|w <username <message>	Send direct chat message to user (no online feature using that yet)
/dumpholo	Dump holomap camera data
/dumpmouse	Dump mouse data
/dumpconv	Dump conversation system data

(Might not work/be available in X4; needs testing)

/lua <luascript>	This executes the given lua command in the Detail Monitor environment

Using the Commands of this Mod

Since the usual prefix Char for Commands (/) is already taken by Egosofts internal Commands and there is an error printed to the Log if it is used by this Mod I decidd to use a diffrent Letter for my Commands, namely it is [&] (Ampersand) as Prefix. You can change this in Letter in the t/0001.xml if you want. Just remember that you did when reffering to this explaination.

Command Overview

Currently the following commands are implemented: (currently working on a a detailed explaination)

Parameters: An explaination of the Parameters if they are specific

Usage: general usage showing all possible inputs with placeholders

Example call: a concrete example how this Command is intended to be used. Depending on the command there might be more than one.

Output: The Output the Example Call generated for me. There will be slight differences for you.

Effect: Description of the Effect the example command has, if any.

&eval

Evaluating one or or more Expressions

Usage: &eval $exp_1 $exp_2 ...

Example call: &eval pobject.cluster.debugname pobject.pilot.debugname

Output:

```
&eval pobject.cluster.debugname pobject.pilot.debugname
pobject.cluster.debugname => Hatikvah's Choice (AYX-867) [0x32dd6]
pobject.pilot.debugname => Yahanis Hebalisos Tumulis X (VPR-008) [0x36542]
```

&setval

Setting a Value at the end of a Property Chain/Expression. Please refer to the Properties Section for a List of Set-able properties.
(needs to be unlocked)

Usage &setval $exp_set $exp_get1 $exp_get2

Example call: &setval pobject.minhull 90

Output:

```
&setval pobject.minhull 90
set property 0x1551f.minhull to 90 (secondary null) - cannot confirm since its not property-accessible
```

Effect: Hull of the current Player Object will never drop below 90% (its indestructible). Note that you need to do this sepearately for each surface Element too if you want.

$warp

Instantly teleporting an Object into another Space or near another Object:

Usage: &warp $exp_object $exp_destination

Example Call: &warp pobject gtarget

Output:

```
&warp pobject gtarget
```

Effect: Instantly Teleports the Player Object close to the current guidance Target

&checkship

Spawning two Ships, one of which gets instantly wrecked, for and generating a Report about it for Ship Modding Purposes. The Ship will change its Paintjob every few seconds from a pre-selected Set, and you can add as many additional ones to the cycle as you want.

Usage: &checkship $macro_id_or_exp crewskill.<number> paintcycletime.<number> ware.paintjob_###1 ware.paintjob_###2 ....

Parameters:

$macro_id_or_exp	a ship macro name or expression that results in a ship macro for spawning/testing
crewskill.<number>	a Number from 0 to 15 to define the Crews skill for the Spawn. Will be random if omited.
Paintcycletime.<number>	time for which each paintjob stays in seconds. Default is 3. 0 is changing every Frame.
Ware.paintjob_####	Adding a Paintjob to the cycle. Can be repeated as often as needed.

Example Call: &checkship ship_par_l_destroyer_02_a_macro crewskill.15 paintcycletime.1

Output:

```
&checkship ship_par_l_destroyer_02_a_macro crewskill.15 paintcycletime.1
converting ship_par_l_destroyer_02_a_macro from string to macro: ship_par_l_destroyer_02_a_macro
Output File is: logs/ut_console/ ship_par_l_destroyer_02_a_macro report.txt
```

Effect: Spawns tow Odysseus E in front of teh Player, one of which immediately explodes to leave a Wreck.
The other one has a full 5 Star Crew and changes its Paintjob every second in the default cycle.

Additionally a Report about this Ship Type is put in the X4 Documents folder under
logs/ut_console/ ship_par_l_destroyer_02_a_macro report.txt

Destroying an arbitary Object (requires additional confirmation; will attempt to bypass protections):
&destroy $exp_object noexplosion

Reading a Text from the Text DB
&readtext $Page_id $t_id <output_method>

Ingame Help Command (depracted):
&help <topic>

Copying an existing Object (WiP; not working yet):
&copyobject (unsure about Syntax)

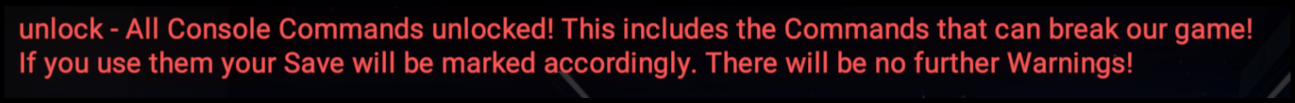
Print all UI events that happen to the Console (except 'Frame_Advanced' and 'chatwindow_opened'):
&watchui <stop>

Print all Events that happen for a certain Object (not all implemented yet; only complete if the watched object is the event.object):
&watch_event_object $exp_object|stop

Enable/Disable additional internal Output:
&debugmode

Do certain Actions on Cues (can be used to force or re-start missions; be careful, can break stuff):
&cue <action> $exp_cue $exp_param

Unlock certain commands that are considered dangerous (description marked in red above):
&unlock



unlock - All Console Commands unlocked! This includes the Commands that can break our game! If you use them your Save will be marked accordingly. There will be no further Warnings!

Color Explaination:

Commands and their Calls:
Actions that can be dangerous to continuing use of Savegames (will mark the Player Characters name with a red #)
Optional Parameter that can be omited if not needed
Optional Parameter that can be omited or repeated if wanted

Output to the Console:
Repeat of the Command (safe Commands)
Repeat of the Command (non-safe Commands)
Standard Output
Debug Output (usually hidden)
Help/Info Output

Expression Syntax Explaination

Expressions in this Console are used as Input for most Commands, and are very similar to the Expressions in the Scripting Languages (aiscript and md) since they are based on them, though there are some differences and pelicularities which will be pointed out. For example ut_console does not use { } (curly brackets) at all, but some properties require it internally.
Basically it is a Chain of Properties seperated by dots (.), starting with a Root property and with each step you get a certain property of the previous result.

Additionally some commands might take their own „Root Properties“ to differ between diffrent types of input values. This has nothing to do with the property chain though, it is just to differ between possible input values. They might start with a property chain from the second step onwards if applicable, but often just take a single value here.

Object References

Objects can be referenced with many methods. This can happen at the start of a property chain, or even in the middle of it if it makes sense in context. Possible ways to reference Objects are: These references are only valid in my Console and do not apply to the xml scripting languages.

ABC-123	Its idcode. Note that i consider the idcode non-unique, but its easy to use. Will always use the first match, but additionally output an error to the Console if other matches are found.
0x1234 (hex id) 12345 (decimal id)	Its Object identifier, that is unique within a game session. Note that its not persistent over sessions. (might change when loading a game) Can be entered in any supported numeric form.
$console_var	If you set a console Var before you can use it as Object reference if it contains an Object.
ptarget	player target
gtarget	guidance target
atarget	player autopilot target
pcontainer pobject	player container (ship or station)
htargets	Holomap Targets (Not yet used by any command)
mapobjects	Holomap Visible Objects (Not yet used by any command)

Root Properties

The following Start Properties are available: (most of them are taken directly from the xml scripting languages unledd indicated otherwise)

Object references	see above for explaination (ut_console only)
$console_var	If you set a console Var before you can access it as root property (ut_console only)
null	simply a null if you need it
true	actually numeric 1
false	numeric 0 in this case
component.<number> object.<number>	The Component/object referenced by the following numeric identifier. Use this if the autodetect fails, or if you want to start an expression chain with such an object. (ut_console omits the {})
gameparam.<param>	Reading from the game params (Startup params?) - not sure yet what this is..
param.<groupname>.<paramname>	reading scriptparams data from libraries/parameters.xml
macro.<macroid>	getting a macro via its id as starting point
md.<scriptname>.<cuename>	getting an MD cue via its Script and Cuename. Can be used further for remote var reading
mdvar.$varname	getting an MD var via its name. Equal function to md.$varname in the game scripts.
global.$varname	getting a global var by its name
faction.<factionname>	getting a faction by its name
tag.<tagname>	getting a tag by its name. Will never fail since the tag is created if it doesnt exist yet.
ware.<warename>	getting a ware by its name
R.<number>	getting the result of a previous expression in the same command (as in Repeat X; must be supported by each command individually)

Following here are more root properties, but i consider them less useful for use in this Console, so i will save myself the explaination. Also they are largely untested and might not work.

position.<x>.<y>.<z>
stat.<statname>
lookup.<category>
entitytype.<entitytype>
warebasket.<id>
killmethod.<method>
commandaction.<action>
formationshape.<shape>
purpose.<purpose>
boardingphase.<phase>
orderstate.<state>
dockstate.<state>
regiongroup.<group>
missiontype.<type>

vector.<x>.<y>.<z>
userdata.<userdataentry>
assignment.<assignment>
notification.<type>
waregroup.<id>
unitcategory.<category>
activity.<activity>
level.<level>
controlpaneltype.<type>
blacklisttype.<type>
moodlevel.<level>
shiptype.<type>
flightbehaviour.<behaviour>
missiongroup.<group>

rotation.<yaw>.<pitch>.<roll>
userdatasigned.<userdataentry>
controlpost.<controlpost>
race.<race>
attention.<level>
deployablecategory.<category>
skilltype.<skill>
alertlevel.<level>
signalleaktype.<type>
blacklistgroup.<group>
weaponmode.<mode>
stationtype.<type>
flightcontrolmodel.<flightcontrolmodel>
cuestate.<group>

readtext.<pageid>.<tid>
terraforming.<entries .....
entityrole.<entityrole>
unlock.<type>
relationchangereason.<reason>
command.<command>
controlposition.<position>
roompopulationtype.<type>
boardingbehaviour.<behaviour>
waretransport.<waretransport>
dronemode.<mode>
roomtype.<type>
objective.<objective>
quota.<quota>

Standard Properties

The following properties can be evaluated on each step. These here are entirely based on what is available in the scriptproperties.html but especially the Properties with Pseudo Data Types/using two steps at once are often not yet implemented. Please refer to said the scriptproperties.html to know what is available for a certain data type/at a certain point in the chain and also what each property is. The Order chosen in this rundown schould mostly match the order of an *unsorted* scriptproperties.html (because this groups related properties nicely)

exists isoperational iswreck isconstruction issurfaceelement canbeattacked extension
isextensionpersonal class realclass state macro grouptag parent
container controllable defensibleobject ship station cluster sector
zone room module canbelivestreamed isinternallystored generationseed seed
name rawname knownname hasbeenrenamed debugname position rotation
velocity speed relvelocity relspeed attention size length
height width owner coverowner trueowner isplayerowned isownerless
isknown isrelationchangedisabled wares revealedpercentage scannedlevel gravidarfactor secrecylevel
isactive isphysicsready canbedismantled isfunctiona ishackabl isindestructible ishacked
ishullunrepairable isrepairable isinvulnerable isshieldunrepairable ismodular hull maxhull
hullpercentage shield maxshield shieldpercentage drop canclaimownership hasstorage
modulesets makerraces primarypurpose ismilitary threatscore lastattacker lastattacktime
isinliveview currentradarrange maxradarrange formationleader currentformationwingmen idcode
isformationleader isformationwingman iscommandeerable iscommandeered isgodobject isgodobjectentry godentry
isgodshipentry isgodstationentry isgodproductionentry isgamestartgodentry isrespawnablegodobject
godentryname godentrytags ismasstraffic ishighwaytraffic istemptraffic iszonechangepending
numwaypoints region ismission missioncue suspicious isradarvisible
canbepickedup canbetowed tugship throttle value buildresourcevalue repairprice
numsignalleakslots scuttleeffect isonlineobject isvisitor isvisitormissionobject venture venturename
masstrafficstartobject masstrafficendobject hasenginemod haspaintmod isunit isdeployable unitcategory
deployablecategory formationshape formationradius isformationrolling isformationrollmembers formationmaxshipsperline
isinhazardousregion isatnavigableposition accesslicence accessrestricted canberecycled
dismantlingobject salvageclaimants isdatavault islandmark isfriendfoe friendlist foelist
target isarmed safetydistance pilot assignedpilot aipilot assignedaipilot
defencenpc tradenpc tradecomputer engineer shiptrader shadyguy roleentities
isnpcassignmentrestricted order nextorder defaultorder orders buildorders
tradeorders hasorderloop commander toplevelcommander assignment commanderentity
activesubordinategroupids subordinates subordinategroupdockoverride subordinategroupid
subordinategroupprotectedsector subordinategroupprotectedposition subordinategroupreinforcefleet
subordinategroupresupplyatfleet subordinategroupattackonsight allsubordinates allcommanders controlroom
haswalkableroom canhavedynamicinterior hasscanner longrange maxscanlevel combinedskill
iscapturable boardingoperation boardingoperations boardingbehaviour allmarinesdispatched boardingresistance
baseboardingresistance boardingstrength constructionsequence defencedronemode loadoutlevel
rawloadoutlevel minloadoutlevel loadoutvariation loadout hasarmeddefencedrones hasarmedminingdrones
hasarmedtransportdrones miningdronemode transportdronemode isenemylockingon ismissileincoming hasweaponmod
hasshieldmod productions storagemodules buildmodules processingmodules dockareas piers
habitationmodules welfaremodules defencemodules connectionmodules buildmodule buildprocessor buildprocessors
freebuildprocessor freebuildprocessors dismantletarget isdismantlingassignedobject claimedsalvage haswaveprotection
hasmasstraffic buildingmodule buildingprocessor build buildanchor canbuildships canequipships
cansupplyships hasplannedconstruction cargo products research dockingenabled
originalproduct resources supplyresources tradewares buyprices sellprices buildbuyprices
buildsellprices waretransport productionmoney wantedmoney istraderestricted hastradesubscription
haspermanenttradesubscription supplies supplyorders money hasownaccount isaccountholder
minbudget maxbudget buildpricefactor tradewaremoney spawntime type typename
numfreeactorslots actors assigneddock docksize dock dockslot hidecargochance
maxspeed maxyawspeed maxpitchspeed maxrollspeed speedlimit canenterhighway parkedat
pickedupobject regiondamageprotection job jobname isjobship isrequestedjobship jobexpired
jobcommander jobmainsector jobmainzone encounterid isencountership constructionmodule warebasket
isdeployedconstructionvessel iscapitalship islasertower canhaveattackablemodules hasshipmod
canbeclaimed issupplyship movementrefobject environment cantowobjects towedobject
takesregiondamage oxygenempty oxygenlow oxygenpercentage oxygentimeremaining buildstorage
canhavebuildstorage istradestation isshipyard iswharf isequipmentdock isdefencestation
isrecyclingfacility ispiratebase isheadquarters isfactionheadquarters isplannedshipyard splannedwharf
isplannedequipmentdock isplanneddefencestation isplannedrecyclingfacility isscheduledfordeconstruction
isguided destinations istransitiondestination istransitionsource launcher destination
exit isaccelerator entryhighway exithighway waitingship highway entry
sequence islocked ispartiallyunlocked isunlocked isadvanced currentyield maxyield
rarity unbundle isdroppedcontainer blueprints base ispersistent isprivate
rooms isbusy isbuilding buildmacros constructingcomponents constructingmodule
requiresconstructionvessel mayrequireconstructionvessel iswaitingforconstructionvessel iswaitingforresources
iswaitingforstorage constructionvessel constructionvesseldeployed elapsedtime elapsedsteptime steptime

totaltime canabortbuild queuedbuild currentslotresources stepresources laststepresources
neededslotresources neededsequenceresources recycled isventuremodule venturedocks ventureships
numpierdocks isproducing ispaused ispausedmanually furnacestartpos requireditems iswalkable
dockarea walkablemodule dynamicinterior freemissionactorslot slotcontext assignedship pier
docked external isstorage isdockingallowed isunitdockingallowed isundockingallowed
isunitundockingallowed todockpos launchpos dockstate isbuildingallowed istradingallowed
isplayeronly isventureronly ventureplatform hasentrypos entrypos hasexitpos exitpos
economy security sunlight god jobs isexclusiveforextensionjobs factionlogic
locationtags alllocationtags yieldthresholds representatives isnormalcluster ispresentation systemid
planets averagedistancetolockbox averagemaxyield iscontested contestingfactions hasgravidarobscuringregion
hashazardousregion containsthewave waveprotectionresources policefaction typicallockboxmacro coreposition
coresize adjacentzones haspriority istempzone isnormalzone islocalhighway issuperhighway
isdisabled origin junctions entryjumpgate exitjumpgate closestpointtoplayer customhandler
controlpost role roleobject titleoverride iconoverride occupationname icon
race page isfemale isavatar iscommable ismissionactor
isremotecommable iscontrolentity isintransit istransferscheduled istemporary ishidden podarrivaltime
roomslot floortags iswalking slowwalkspeed walkspeed runspeed isspeaking
isinspeakrange lastspeaktime experienceprogress neededexperience controlled assignedcontrolled spacesuit
spacesuitmacro inventory stock shouldinformplayer shouldwarnplayer istradecomputer isshadyguy
isindependent tradesvisible facecutscene npctemplate targetslot currentchair hasclothingmod
hastool isinconversation isreadytofire mode isrepairing ismining iscombat
barrelposition component tags group offset staticoffset staticrotation
controlposition available buyer seller isbuyoffer isselloffer isoffer
isorder ware amount desiredamount offeramountt transferredamount minamoun
destroyedamount volume offervolume minvolume price unitprice minprice
relativeprice quantityfactor hasdynamicprice stocklevel bundle tradeoffer buyfree
sellfree iswareexchange isshiptoship iscrewexchange isbuyerpassive issellerpassive iscancelled
isshipbuild isrecycleshipbuild isexpansion isupgrade issoftwareonlyupgrade isrestock
isshipmodification isprocessing buildobject construction faction time consumables
boardee attackers approachingpods boardingphase boardingapproachthreshold boardinginsertionthreshold
description minrelation precursor issellable count list random
id script canplayercancel isinfinite isinloop isoverride isrunning
trade operation requiredskill clone last randominrange min
max average x y z yaw pitch roll inverse forward
right up shortname prefixname spacename homespacename primaryrace
knowntoplayer defaultpolicefaction coalition teamname customteamname isrelationlocked licences
heldlicences isaggressive iseconomic ispolice isprotective willclaimspace representative
headquarters doesresupply averageprice maxprice pricerange transporttag isinventory
isammo iscargo iscrafting isvolatile isgift israre isdropallowed
isresearchable illegal objectmacro objectcount ssoftware isweaponmod isenginemod
isshieldmod isshipmod isequipmentmod equipmentmodquality ispaintmod paintmodquality
isclothingmod clothingmodquality isprocessed table free capacity purposemacro
purposename docksizes productionvolume consumptionvolume cargocapacity allowedowners allowedwares
maxrelation enemy active version static staticbase namespace
library isinstance hasmissionoffer hasmission hasguidance offerlocations missiontype
missionendtime objective objectiveendtime actor isnumeric isstring femalename
pluralname tag hirable tiers skilltypes maxmk age
occupiedship platform entity galaxy computer activity autopilottarget
conversation conversationactor hasactivemission activemissiontype activemissionwaypoint hasacceptedonlinemission
isincontrolposition scanlevel debug isscreenshotmode screenshotmode ismapeditoractive
isinfullscreencutscene isinfullscreenmenu isvrversion isvrmode chardensity modulename
moduledescription speakpriority flightassist isdockuiactive hasemergencyeject isemergencyejectactive
shouldplayertaxiwaitforplayer shouldplayershipswaitforplayer isonline canactivateliveview
recommendedmodule isgameover index element key null
integer largeint float angle hitpoints largefloat cue
keyword xmlkeyword componentstate killmethod relationchangereason flightbehaviour
flightcontrolmodel entitytype entityrole skilltype missiongroup level alertlevel
command commandaction roompopulationtype purpose controlpaneltype signalleaktype blacklisttype
blacklistgroup moodlevel orderstate datatype cuestate notification string
componentslot licence vector quadrant unlock weaponmode dronemode
shiptype stationtype roomtype regiongroup none down left
front back param param2 param3

Special Properties

These Properties are not part of the original Property Chain Syntax, but they emulate other functions of the Scripting Language that might be useful. Namely Type conversions and such stuff.

$variable Internal Call: $currentStep.{$nextStep}
=> if the current result is a a Cue, Entity or Table wit will read a Variable off them (Cue Variable, Entity Blackboard Var, Table Value from a Key) - baiscally the same syntax as with global.$variable or mdvar.$variable

<number> Internal Call: $currentStep.{$nextStep}
=> If the current result is a Group, List or Table it will result in the numeric nth Entry of it (1-based). In case of Tables it obviously needs to have the respective numeric key

(Note: For tables other Keys than Numeric or String are not supported properly yet; planned is a workaround-y way of using Console Vars, but details have to be ironed out yet)

rl rt rg rb rc Internal Call: $currentStep.{$nextStep}
=> as in 'readlist','readtable','readgroup','readblackboard' or 'readcue' enforces the previous behavior in case it doesnt work automatically, with the next Value in the Chain being the Var/Key Name

comp Internal call: $CurrentStep == $NextStep
=> compare hack (temporary); compares the current result of the Chain with the next single Step (useful for eg chekcing against an object reference); makes the result boolean.

cv:i => convert to integer Internal call: ($CurrentStep)i

cv:f => convert to float Internal call: ($CurrentStep)f

cv:component Internal call: component.{$CurrentStep}
=> convert to component – turns a number into an object if possible. This should usually happen automatically by each command if an Object expected, but you can enforce it with this

typeof => results in the datatype of the current Property Internal Call: typeof $CurrentStep

distanceto Internal Call: $CurrentStep.distanceto.{$NextStep}
=> results in the Distance between the current Object and the following Object. Next Object must be a single location Step. (like a direct Object reference)

The following Stuff are just additional Tips and have nothing to do with my mod itself:

Using scriptproperties.html locally (and some additions)

How to get an Apache Server set up to view scriptproperties and jobeditor (sidestepping CORS):
(i know it is overkill for this, but im more familiar with it than other methods)

- Download and install XAMPP from https://www.apachefriends.org/de/index.html
  (NOTE: Install to C:/XAMPP or similar, since the Program needs to write to its own Folder, which windows restricts in program files)
  Minimum Installation is sufficient.

- After the Setup ran you should find yourself in the XAMPP control panel.
  In the Line with Apache click on [Config] -> Browse Apache
  Then go in the folder config -> extra and open httpd-vhosts.conf for edit

- Add this Section at the end of the File and point it to your extracted Game Files:

  ```
  <VirtualHost *:80>
     DocumentRoot "C:/xampp/htdocs"
     ServerName localhost
     Alias /x4mod "C:/X4_extracted"
     <Directory "C:/X4_extracted">
        Options Indexes FollowSymLinks Includes ExecCGI
        AllowOverride All
        Order allow,deny
        Allow from all
        Require all granted
     </Directory>
  </VirtualHost>
  ```

  (Edit both of the C:/X4_Extracted to point to your extracted game files)
  Save and close the File.

- back in the XAMPP Control Center click the box left of Apache to set it up as Service (so it starts with Windows), and then click [Start] to the right of it to start the Webserver and open
  localhost/x4mod

- in a Browser to confirm it is working. You can open the jobeditor.html and scriptproperties.html from here.

Also you can reference the xsd files without having them to move around, just add this to your ai/md files in the root node:

```
<mdscript name= .........  xsi:noNamespaceSchemaLocation="http://localhost/x4mod/libraries/md.xsd" >
<aiscript name= .........  xsi:noNamespaceSchemaLocation="http://localhost/x4mod/libraries/aiscripts.xsd" >
```

Useful additional Tricks to improve the reference files

Show a full list of Vanilla Macros and also print their respective File Path as Description:

- libraries/scriptproperties.xml – replace the *<keyword name=“macro“* section:

```
<keyword name="macro" description="Macro lookup">
 <property name="&lt;macroname&gt;" result="Macro" type="macro" />
 <import source="../index/macros.xml" select="/index/entry">
  <property name="@name" result="@value" type="macro" />
 </import>
 <import source="../extensions/ego_dlc_split/index/macros.xml" select="/index/entry">
  <property name="@name" result="@value" type="macro" />
 </import>
 <import source="../extensions/ego_dlc_terran/index/macros.xml" select="/index/entry">
  <property name="@name" result="@value" type="macro" />
 </import>
 <import source="../extensions/ego_dlc_pirate/index/macros.xml" select="/index/entry">
  <property name="@name" result="@value" type="macro" />
 </import>
 <import source="../extensions/ego_dlc_boron/index/macros.xml" select="/index/entry">
  <property name="@name" result="@value" type="macro" />
 </import>
 <import source="../extensions/ego_dlc_timelines/index/macros.xml" select="/index/entry">
  <property name="@name" result="@value" type="macro" />
 </import>
</keyword>
```

Show Script Param Values in Scriptproperties:

three changes needed:

- libraries/scriptproperties.xml- replace the *<keyword name="param"* section:

```
<keyword name="param" description="Access to script parameters in parameters.xml">
 <property name="&lt;categoryname&gt;.&lt;paramname&gt;" result="Script parameter" />
 <import source="parameters.xml" select="/parameters/scriptparams/category/param">
  <property name="../@name" subname="@name" result="@value" type="string" />
 </import>
</keyword>
```

- libraries/scriptproperties.xsl - replace the *<xsl:template match="property"*> section:

```
<xsl:template match="property">
 <tr>
  <td width="20%" class="property">
   <span class="propertyname">
    <xsl:value-of select="@name" />
    <xsl:if test="@subname">
     <xsl:text>.</xsl:text>
     <xsl:value-of select="@subname" />
    </xsl:if>
   </span>
  </td>
  <td width="10%" class="property">
   <xsl:if test="@type">
    <xsl:apply-templates select="@type" mode="datatyperef" />
   </xsl:if>
  </td>
  <td class="property">
   <xsl:if test="@result">
    <span class="comment">
     <xsl:value-of select="@result" />
    </span>
   </xsl:if>
  </td>
 </tr>
</xsl:template>
```

- scriptproperties.html- replace the *function importExternalProperties()* function:

```
function importExternalProperties() {
    var loadedfiles = new Object(); // Store loaded files here, so we don't import the same file twice
    var textdbdef = evaluateXPath(xmlDoc.documentElement, "/*/textdb");
    if (textdbdef && textdbdef.length) {
        var textdbfilename = textdbdef[0].getAttribute("source");
        if (textdbfilename) {
            textdbDoc = loadXMLFile(textdbfilename);
        }
    }
    var foundnodes = evaluateXPath(xmlDoc.documentElement, "/*/keyword/import/property");
    for (var i = 0; i < foundnodes.length; ++i) {
        var propertynode = foundnodes[i];
        var importnode = propertynode.parentNode;
        var keywordnode = importnode.parentNode;
        var sourcefile = importnode.getAttribute("source");
        var selectexp = importnode.getAttribute("select");
        var nameexp = propertynode.getAttribute("name");
        var subnameexp = propertynode.getAttribute("subname"); // Add this line to get the subname expression
        var resultexp = propertynode.getAttribute("result");
        var type = propertynode.getAttribute("type");
        var ignoreprefix = propertynode.getAttribute("ignoreprefix");
        if (sourcefile && selectexp && nameexp) {
            var importedxml = loadedfiles[sourcefile];
            if (!importedxml) {
                importedxml = loadXMLFile(sourcefile);
                loadedfiles[sourcefile] = importedxml;
            }
            if (importedxml) {
                var importedtypes = evaluateXPath(importedxml.documentElement, selectexp);
                for (var j = 0; j < importedtypes.length; ++j) {
                    var curtype = importedtypes[j];
                    var namenodes = evaluateXPath(curtype, nameexp);
                    var subnamenodes = evaluateXPath(curtype, subnameexp); // Add this line to get the subname nodes                  if
(namenodes && namenodes.length > 0 && (namenodes[0].data || namenodes[0].nodeValue)) {
                        var newproperty = xmlDoc.createElement("property");
                        // Set property name
                        var name = String(namenodes[0].data || namenodes[0].nodeValue);
                        if (ignoreprefix && (ignoreprefix == "1" || ignoreprefix == "true") && name.lastIndexOf(".") >= 0) {
                            name = name.substr(name.lastIndexOf(".") + 1);
                        }
                        newproperty.setAttribute("name", name);
                        // Set property subname
                        if (subnamenodes && subnamenodes.length > 0 && (subnamenodes[0].data || subnamenodes[0].nodeValue)) {
                            var subname = String(subnamenodes[0].data || subnamenodes[0].nodeValue);
                            newproperty.setAttribute("subname", subname);
                        }
                        // Set property result (either from text node or attribute value)
                        if (resultexp) {
                            var resultnodes = evaluateXPath(curtype, resultexp);
                            if (resultnodes && resultnodes.length > 0) {
                                newproperty.setAttribute("result", convertFormatString(resultnodes[0].data || resultnodes[0].nodeValue));
                            }
                        }
                        // Set property type
                        if (type) {
                            newproperty.setAttribute("type", type);
                        }
                        keywordnode.appendChild(newproperty);
                    }
                }
            }
        }
    }
}
```

Show Masstraffic Jobs in Jobeditor

- libraries/editor.xml :

  Replace this:

  ```
   <table id="jobs" name="Jobs">
   <file name="jobs.xml" select="/jobs/job[ship and not(masstraffic)]" />
  ```

  change to:

  ```
   <table id="jobs" name="Jobs">
   <file name="jobs.xml" select="/jobs/job" />
  ```

Add a Column for Loadout Levels in the Jobeditor

- libraries/editor.xml – Add this at the end of the *<columngroup name="Ship" base="ship">* section:

  ```
      <column value="loadout/level/@min" name="Loadout Min" type="float" />
      <column value="loadout/level/@max" name="Loadout Max" type="float" />
  ```