Tech Helper
Tutorial

INTRODUCTION

Age Of Empire III have lots of useful files to edit/modify, one of them is Techtree, Techtree is an xml file containing all the techs, enhancements and HC Cards. It is stiff to edit or modify Techtree with notepad or any text editor or any xml editor, but Tech Helper provides lots of inbuilt functions that help you in modifying the Techtree but it will looks hard to everyone until he/she finishes the tutorial or have modified the Techtree before (but it will be better to read the tutorial).

What is an attribute?
Take an example:

```
<Effect type="Data" amount="0.75" subtype="Cost" resource="Food" relativity="BasePercent">
 <Target type="ProtoUnit">Musketeer</Target>
</Effect>
```

Red   : Name of Attribute
Green   : Value of Attribute

What are Subtypes?
As the name suggest its meaning that subtypes are subtype of Data type, which depends on what kind of effect, tech will have
For example:
>   We want to increase\decrease the hitpoints of any building or unit then we need to choose "hitpoints" subtype

We can add custom subtypes by just right click on the tool and select "Add Subtype" but remember that subtype name must matches to proto substances.
For example:
>   We want to add "LOS" as subtype then we need to know that Is it exists in proto or not? And we found that, Building and unit have LOS

Some subtypes are identical same names but their attributes might be different.
For example:
>   Take a close look on "Damage" Subtypes, where one of them have "allactions" attribute and second have "action" attribute

We can delete subtypes too, to delete subtype, first select it then right click on it and hit "Delete".

What is Relativity?
It's a way of increasing\decreasing the value of any unit or building
>   "Absolute"   :   used when need of increment or decrement of the amount
>   "Assign"   :   direct assign the value
>   "BasePercent" :   the amount in the field will be multiplied by the base value of target

What is Status?
The status of tech, there are 3 types
>   "active"   when no need to ask the user to call the tech
>   "obtainable"   when icon of tech shows up in the specified location to call
>   "unobtainable"   when icon of tech hide from the specified location to call (default status of every tech)

1. How to add new tech

Click on the "Add Tech" Button at the bottom of the tool, now you will see a new window,
Enter all the info and remember "Tech Name" and "DBID" must be unique
To enter Cost for the tech you must enter it in a specified format "<costtype>-<amount>"

For example:

We want to create a tech for "Longbowman" and named the tech is "SuperbLongbowmen"
Now we need to enter "DBID", the DBID should be in series that's why we need the last DBID and we can get it from the top-left of the window
Now "DBID" will be 2698
Next we need to enter the "DisplayNameID", mean's the name of the tech that will be written in "String Table"
Next "Research Points", mean's how much point you will get, when you call this tech
Now come at "Cost", its name is enough to explain it
Next comes "RollOverText ID", mean's the info about tech will be show when you hover the mouse on it
"Icon Path", name is enough to explain it
At the end "Flag(s)*" lefts, flag(s) call the inbuilt functions of game that helps to achieve the tech

How to write Cost

First you should know what type of cost tech will ask (i.e. Ships, Wood, Food and Gold)
You don't need to write entire the word for cost, just press 's' for "Ships", 'w' for "Wood" and so….
When you choose the cost type then press '-' (below F9) then enter the amount

How to write Icon Path

Icon path must start from "Art" folder of the game
For example:
We placed a **.ddt** file of 64x64 dimension in the "<drive>\Program Files\Microsoft Games\Age of Empires III\art\ui\techs" and the file name is "superblongbowmen" (see the below given icon).
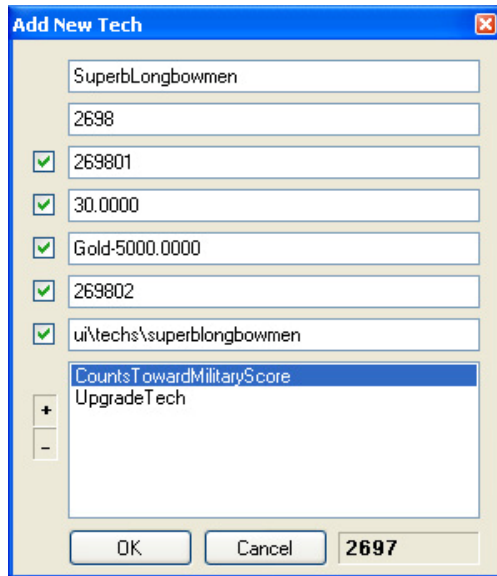
Now, we will write the icon path something like this "ui\techs\superblongbowmen"
Remember never write file extension (i.e. ddt) in the path

How to write flags

Press '+' sign against the list of flags to add
Press '-' sign to delete

* When adding tech find out other same tech that game already have and copy their flags

Now, the tech window will look like this:

How to add String in String Table

Right click on tool and select "String Table", wait for about half-second or until the bar get complete.

Now click on "Add" button and entered the desired unique ID then press "OK" after that enter the string then press "OK"

For example:

Press "Add" button and enter the unique ID 269801, press "OK", now enter the string "Superb Longbowmen"

And press "OK" again.

Do the same with 269802 and write string "Get Special Effect For Longbowmen"

Thus, we have added the two required unique IDs with string.

The tech "Superb Longbowmen" is created, but it still incomplete; to complete it we need to do these tasks:
1. Add some Effects
2. Add some pre-requirements (OPTIONAL)
3. Set its status to obtainable
4. Assign it a location

So, now, we will see that how can we add these things one by one

How to add Effect(s)

First we must know what will be the effects of this tech when we call it,

For example:

1. We want every Longbowman`s hitpoints should be multiplied by 200 with base value
2. Longbowmen should have build limit of 100
3. Longbowmens` name should be changed to "Superb Longbowmen"

First select the tech from the list,

To add first effect we need to click on "Add Effect" button, then fill the required data (see the below given picture), after that press "OK" ("Add Effect" button's caption is now changed to "OK")
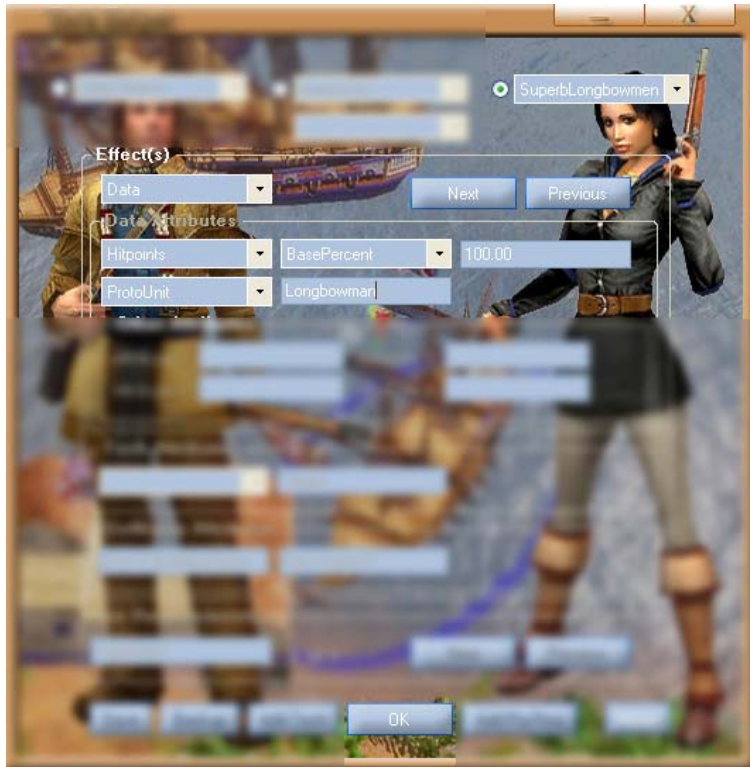
For second and third effect, see the below given pictures respectively
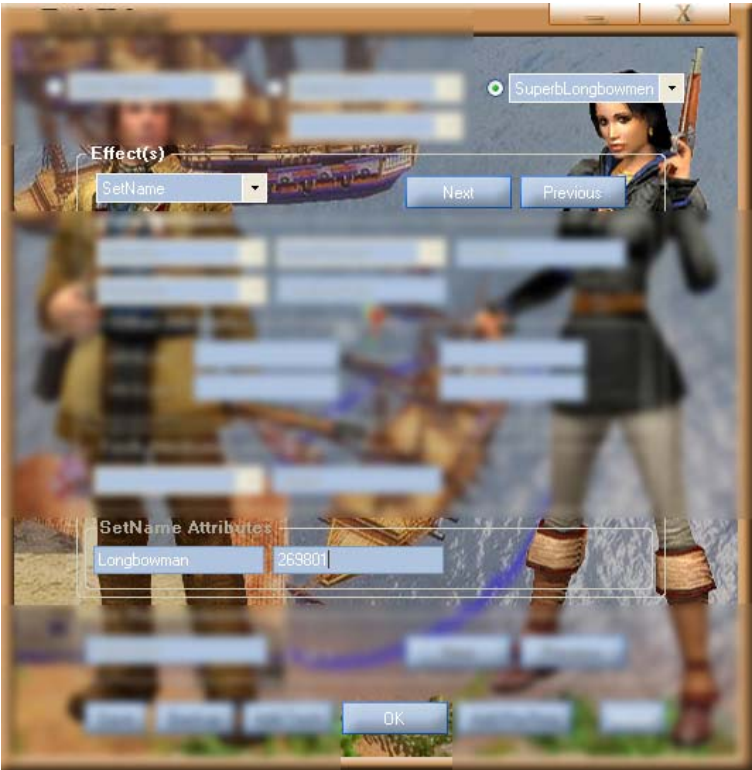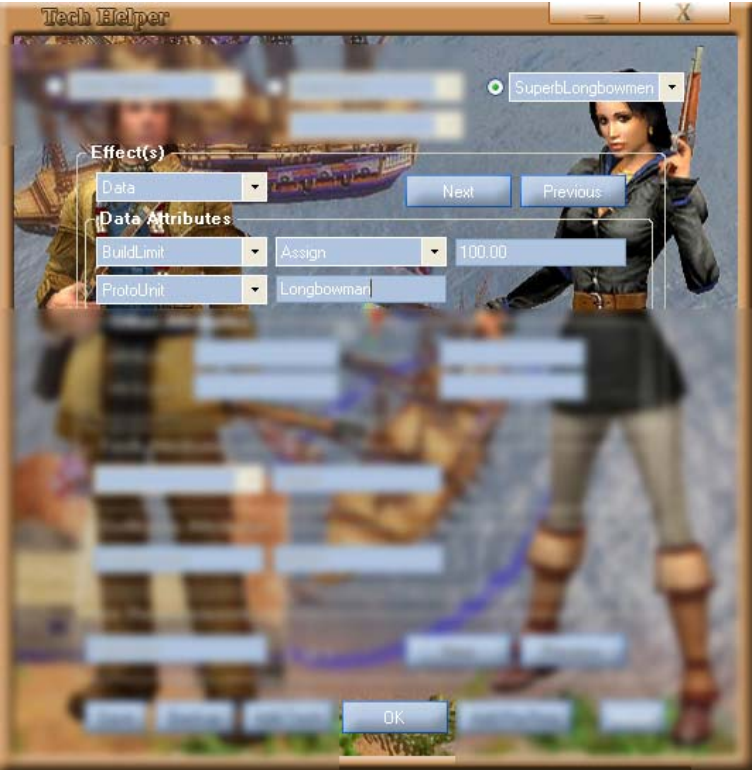
Thus we have add effects in tech, but the tech still have three lacks
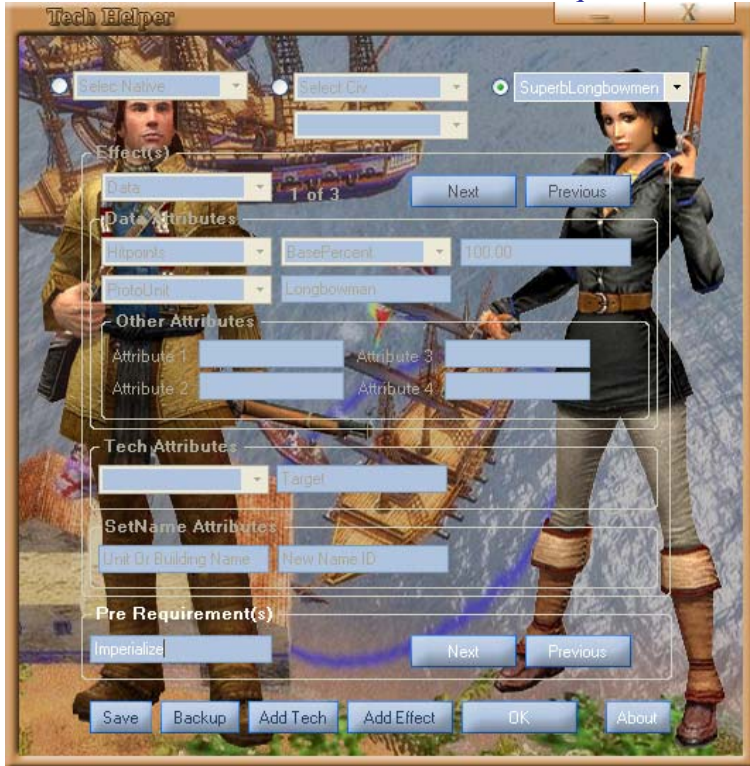
How to add Pre-requirement(s)

Same as effects, first we need to think that what will be the requirements of tech before calling

For example:

1. The tech should not be called until player finished the imperial age
2. Longbomens` must be at least "Veteran Longbowmen" before calling tech
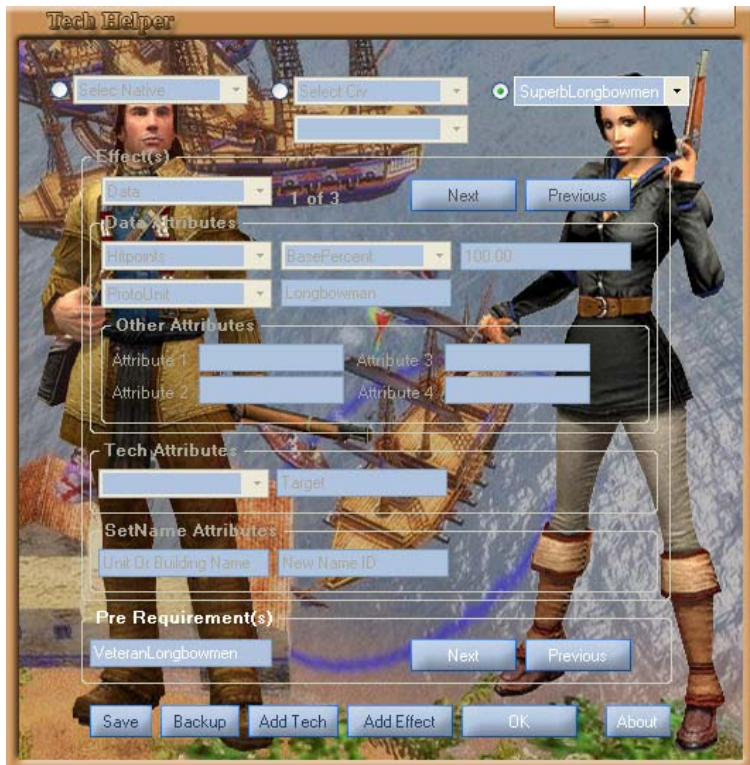
To do that we need to click on "Add Pre-Req" button, see the below given pictures to enter the data

Then press "OK"

Then press "OK"

Thus, the tech has 2 pre-requirements

How to obtain the tech

All the techs can be obtained by the "Ages" or by "HC Cards"

For example:

Here we want to obtain it in the starting of game with "British" Civilization

To do that we need to select "British" and then select the "Age0"

Now, press "Add Effect" button, select Effect type "Tech" and then select Status as "obtainable"

And write the tech name "Superb Longbowmen" in target field

It should look like this:
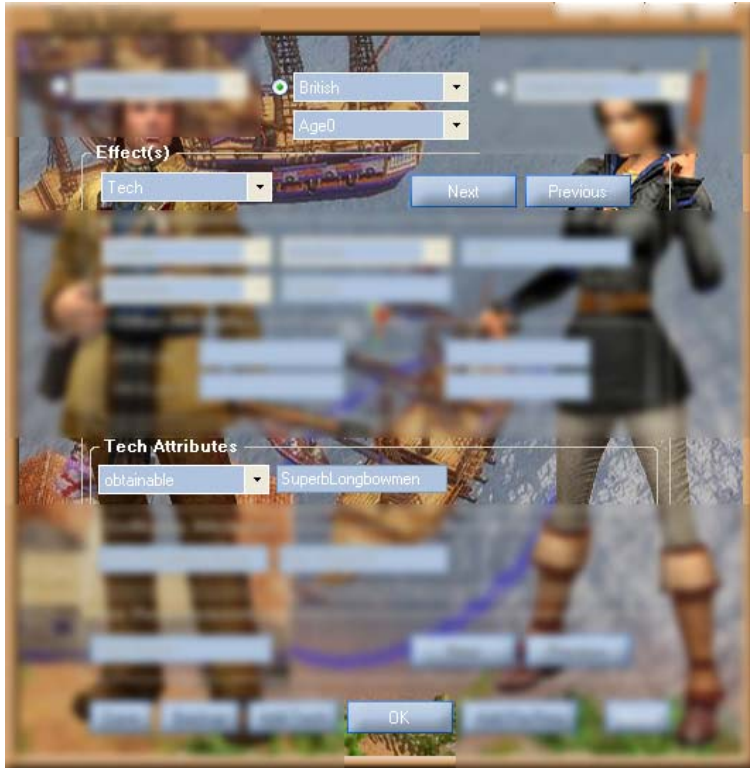
Press "OK"

How to add the calling location of the tech

There are two ways to do it

1. by HC Cards
2. by building or unit

For example:

We want to set location of tech in building named "Barracks"
To do that select the tech "SuperbLongbowmen", then right click on the tool and hit the "Add to Proto"
Now enter the name of building or unit (must be proto name) where the tech will be shown, after that press '-'and enter the column number, again press '-' and enter the row number. This entire task must be in a specified format.

Format

<building or unit name in proto>-<column no.>-<row no.>
It must look like this:
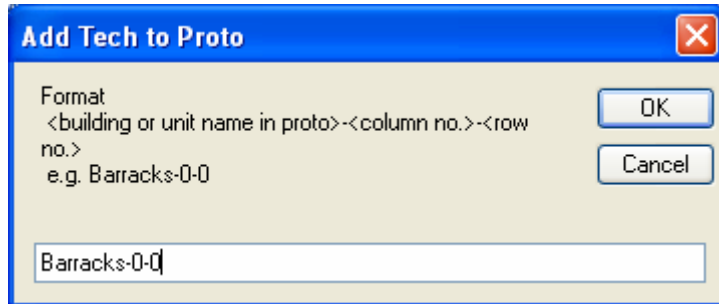
Now press "OK"

Thus, we have completed the tech

Now it's the time to check the tech we have created

Checking:

Run AOE 3, start a new game with discovery age, Reach at 3rd age and upgrade Longbowman to "Veteran Longbowman" now we can see the icon of the tech we have just created, examine it, then we will find that it requires "Imperial Age" or "5th Age", call the 4th and 5th age, now re-examine the tech then we will find that its requirement are fulfilled, first examine the tech before calling, hover mouse on it, then you will see the name of tech (the string we added in string table with 269801 ID) and the info about tech (269802 ID).

Now call it, and then examine, Longbowman name is now "Superb Longbowmen", his "Hitpoints" are increased and "Build Limit" is assigned as 100.

Some Screenshots:

Require Imperial Age

Before

After

ENJOY….!!!

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