Overview of AI files creation

You may modify this file to create new computer player strategies. To do so, follow the instructions below and save the file as a text file with an .ai extension.

The map and resources can make or break the plan for a CP. Without sufficient resources early on, the .AI file won't continue building. Instead of a bustling aggressive CP, you get a ghost town, especially if you're killing off any villagers that come snooping around you. Look at the surrounding terrain where the CP is initially placed. The AI doesn't do well in a highly congested area. Without decent access to resources throughout the game, the CP will stop processing the .AI file and gives up on it. Also keep an eye on the lions. Lions can stop a CP in its tracks. Make sure lions are placed where they will most likely be encountered by the CP in the middle to later stages of the game.

The .AI file needs to have a good progression not only in units built, but also the structures that produce those units. The CP will skip building things if it doesn't have the resources or a free building for it. When it can, it will go back and try to build what it skipped earlier. This can cause an .AI file to get out of synch with how you intended to build. If you don't have a good relationship of resources available to the sequence of builds in the .AI file, it won't matter what you do in the .PER file (although you can help this out a little in the .PER file). The builds get out of sequence, things bog down, the CP can give up trying. In short, the CP will be a loser.

.ai files contain the units, buildings and research that will be performed by the computer player in the general order listed. The computer will will try to progress through the list and maintain what has been built. For example, when a unit or building in the list is destroyed, it will generally be replaced before a new unit or building further down on the list will be created.

The sample list contains one of every item to be trained, built, or researched in Age of Empires. Storage Pits, Houses, and Granaries (although included in the list) can be handled completely by the computer player (if the appropriate strategic number is set for the computer player). In other words, these need not be placed in the list at all; the computer player will build them when they are needed. (Sample List is located in the Docs Directory of your Age of Empires CD).

The sequence of items in this list is important. For example, the Market must be built before a Farm, etc. As long as the game rules are respected by maintaining the prerequisite order, items in the list can be resequenced. The technology tree foldout is a good reference source for the prerequisites.

Items on the list that cannot be built or researched (for any reason) are eventually skipped (the skipping can be controlled by setting strategic numbers in the computer player's .per file).

If there are already units on the board that are also in the Strategy list, these units will be counted as already created and will not be rebuilt.

Hints & Tips
Here are some tips for creating your own .ai files. The sample file does not necessarily adhere to the principles

that follow. Instead, this list is placed in an order that makes the items easy to find so that you may create your own list.

1. Keep the quantity field down to 1 or 2. Higher quantities will cause the computer player to pause on that item until the quantity is fulfilled.
2. Do not research or build an item from a building directly after constructing that building. Example: Don't place Bowman after Archery Range. Doing so may cause the computer to pause on the Bowman until the Archery Range construction is complete. Instead, put another item between the Archery Range and the Bowman.
3. Do not place two or more items in a row that come from the same building. Example: Priest, followed by Polytheism, Mysticism and Astrology. Instead, stagger items from multiple buildings to ensure that production at one building does not slow progress through the rest of the list. Good example:

   Priest
   Man
   Polytheism
   Man
   Mysticism
   Market1
   Astrology.

4. Limit retrains (see below) of early-age infantry and archers.

   This ensures that when they are killed they will not be retrained. This frees slots (under the population cap) for them to be replaced by higher-level soldiers. The same concept applies to villagers and fishing boats.

5. Limit the number of units trained to approximately 50. When the computer reaches its population cap of 50, its advance through the remainder of the list will slow down. If your list calls for 30 villagers and 30 military units, do the following:

   -Put 10 villagers, or early-age soldiers on limited retrain.
   This will open slots for 10 superior replacements later.

   -Put the last 2-10 units you want to have trained in the very last line of the file.
   This way, if you exceed the population cap, you will do so on the last item and not interrupt the progress of the list.

6. Start by modifying an .ai file that is already close in content to the file you want to create. If that list is missing certain items, copy them from the list below and paste them into your .ai file.
7. In the Stone Age, the computer must be able to quickly locate forage bushes, trees, and/or water. Failure to do so will cause the computer not to place a Granary, Storage Pit, and/or a Dock. This may prevent your .ai file from reaching the Tool Age, since these buildings are necessary prerequisites for reaching the Tool Age.
8. Test! After you have completed your .ai file, put it into a scenario, give the computer unlimited resources, and observe the build process on x2 speed. Insure that all items are correctly built. Delete items that have limited retrains and ensure that they are replaced with other units. This technique will greatly accelerate your .ai design and development process.

Legend for the prefix to the ID number

Each object in the game has a unique ID number. In the strategy file, that ID number is preceded by a qualifying prefix. The prefixes are listed below:

B – Building – Will be rebuilt if destroyed.

A – Building – Will be rebuilt up to to the number of times specified in the "Limited Retrains" column.

R – Research – Item will be researched if possible. If not possible, it will be skipped according to the strategic numbers.

C – Research – Item will be researched if possible. If not possible, the computer player will progress no further until this critical research is done. For example, if the computer player does not have enough food to advance to the Tool Age, it will wait to collect enough food and will not skip the Tool Age).

U – Unit – Will always be replaced if killed.

T – Unit – Will be trained up to the number of times specified in the "Limited Retrains" column. Example: 1 indicates that this unit will be created once. Once killed, this unit will not be created again.

Breakdown of .AI – Building

Sample .ai Strategy File Line

ID	Description	Quantity	Parent	Limited Retrains
B0	Academy	1	-1	–

A or B can be used with the building lines.
A = Building will be rebuilt up to the number of times specified in the Limited Retrains column.
B = Building will be rebuilt if destroyed.

Computer Descriptions – How the computer corresponds the program name for the Research to the actual Research name.

Actual Research Names.

These are the "Parent" numbers – matches the Research to the building it is being researched in. Don't mess with these!
12=Barracks, 0=Academy, 87=Archery Range, 45=Docks, 109=Town Center, 104=Temple, 49=Siege Workshop, and 101=Stable.

B0 Academy Academy -1	B101 Stable1	B101 Stable1
B103 Storage_Pit1	B104 Temple1	B109 Town_Center1
B12 Barracks1	B276 Wonder	B45 Dock_1
B49 Siege_Workshop	B50 Farm	B70 House
B70 House	B70 House	B72 Wall_Small
B72 Wall_Small	B72 Wall_Small	B79 Watch_Tower
B79 Watch_Tower	B79 Watch_Tower	B82 Government_Center
B84 Market1	B87 Range1	

Breakdown of .AI – Research

Sample .ai Strategy File Line

ID	Description	Quantity	Parent	Limited Retrains
C102	Bronze_Age	1	109	–

R or C can be used with these.

R = Research Item will be researched if possible. If not possible, it will be skipped according to the strategic numbers.

C = Research Item will be researched if possible. If not possible, the computer player will progress no further until this critical research is done. For example, if the computer player does not have enough food to advance to the Tool Age, it will wait to collect enough food and will not skip the Tool Age.

Computer Descriptions – How the computer corresponds the program name for the Research to the actual Research name.

Actual Research Names.

These are the "Parent" numbers – matches the Research to the building it is being researched in. Don't mess with these!

12=Barracks, 0=Academy, 87=Archery Range, 45=Docks, 109=Town Center, 104=Temple, 49=Siege Workshop, and 101=Stable.

C101 Tool_Age	C102 Bronze_Age Bronze Age 109	C103 Iron_Age
R106 Ballistics	R107 Wood_Working	R108 Gold_Mining
R109 Sstone_Mining	R11 Stone_Wall	R110 Craftmanship
R111 Siege_Craft	R112 Architecture	R113 Aristocracy
R114 Writing	R117 Iron_Shield	R12 Sentry_Tower
R13 Medium_Wall	R14 Fortifications	R15 Guard_Tower
R16 Watch_Tower	R18 Afterlife	R19 Monotheism
R2 Catapult_Tower	R20 Fanatiscm	R21 Mysticism
R22 Astrology	R23 Jihad	R24 Polytheism
R25 Juggernaught	R27 Helepolis	R28 Wheel
R30 Coinage	R31 Plow	R32 Artisanship
R34 Nobility	R35 Engineering	R36 Massive_Catapult
R37 Alchemy	R38 Heavy_Horse_Archer	R38 Fishing_Ship
R40 Leather_Armor_-_Soldiers	R41 Leather_Armor_-_Archers	R42 Leather_Armor_Mounted
R43 Scale_Armor_-_Soldiers	R44 Scale_Armor_-_Archers	R45 Scale_Armor_-_Cavalry
R46 Tool_Working	R47 Bronze_Shield	R48 Chain_Mail_-_Soldiers
R49 Chain_Mail_-_Archers	R5 Medium_War_Ship	R50 Chain_Mail_-_Cavalry
R51 Metal_Working	R52 Metalurgy	R54 Heavy_Catapult
R56 Improved_Bow	R57 Composit_Bow	R6 Merchant_Ship
R63 Axe	R64 Short_Sword	R65 Broad_Sword
R66 Long_Sword	R7 Trireme	R71 Heavy_Cavalry
R73 Phalanx	R77 Legion	R78 Cataphracts

| R79 Centurion | R8 Heavy_Transport | R80 Irrigation |
| R81 Domestication | R9 Trireme_with_Catapult | |

Expansion Pack Rise of Rome ONLY!

| R126 Scythe_Chariot | R125 Armored_Elephant | R119 Medicine |
| R120 Martyrdom* | R121 Logistics | R122 Tower_Shield |

*Put a double slash before this line to "negate" it, or completely remove it. Computer Players don't use Martyrdom so you don't want them to spend 600 Gold on this.

Breakdown of .AI – Units

Thanks to Dave "Bigdog" Pottinger for helping with this.

Sample .ai Strategy File Line

ID	Description*	Quantity*	Parent	Limited Retrains*
T73	Soldier_Inf1	2	12	1

U or T can be used with these.
U – Unit will always be replaced if Killed. The limited retrain has no effect if you use the "U" designation for the unit.
T – Unit will be trained up to the number of times specified in the "limited retrains" column. Example: 1 indicates that this unit will be rebuilt once. Once killed, this unit will not be created again, and this line will be ignored for the rest of the game.

Computer Descriptions – How the computer corresponds the program name for the Research to the actual Research name.

Actual Research Names.

These are the "Parent" numbers – matches the Research to the building it is being researched in. Don't mess with these!
12=Barracks, 0=Academy, 87=Archery Range, 45=Docks, 109=Town Center, 104=Temple, 49=Siege Workshop, and 101=Stable.

* The limited retrain may, at times, train one more unit than asked for (i.e. if you say 2, sometimes you may get 3).

* There is no provision for the maintenance with the pop cap; if you put 50 villagers in the front of the list, you're not going to get any soldiers on the map.

* The unit "names" only change when there is a major upgrade. For example, an axeman isn't on the page, but that's because an axeman is really just a clubman after you've researched the axe.

U73 Soldier-Inf1 Clubman 12	U75 Soldier-Inf3 Short Swordsman 12	U282 Soldier-Inf6 Legion 12
U93 Soldier-Phal1 Hoplite 0	U291 Soldier-Phal3 Centurion 0	U4 Soldier-Archer1 Bowman 87
U5 Soldier-Archer2 Composite Bowman 87	U41 Soldier-Chariot2 Chariot Archer 87	U25 Soldier-El_Archer Elephant Archer 87

U39 Soldier-Cavalry3_Arc7	U299 Soldier-Scout	U40 Soldier-Chariot1
Heavy Horse Archer 87	Scout 101	Chariot 101
U37 Soldier-Cavalry1	U46 Soldier-Elephant	U35 Soldier-Catapult1
Cavalry 101	War Elephant 101	Stone Thrower 49
U11 Soldier-Ballista	U13 Boat-Fishing1	U15 Boat-Trade1
Ballista 49	Fishing Boat 45	Trade Boat 45
U17 Boat-Transport1	U19 Boat-War1	U250 Boat-War4
Light Transport 45	Scout Ship 45	Catapult Trireme 45
U277 Boat-War5	U125 Priest	U83 Man
Juggernaught 45	Priest 104	Villager 109

Expansion Pack Rise of Rome ONLY!

U347 Slinger	U338 Soldier-Camel	U360 Fire-Galley
Slinger 12	Camel Rider 101	Fire Galley 45

Breakdown of .AI – Starting your tribe (The opening)

Thanks to Michael "Archangel" McCart for helping with this.

The sequence of items in this list is important. For example, the Market must be built before a Farm, etc. As long as the game rules are respected by maintaining the prerequisite order, items in the list can be resequenced. The technology tree foldout is a good reference source for the prerequisites.

Items on the list that cannot be built or researched (for any reason) are eventually skipped (the skipping can be controlled by setting strategic numbers in the computer player's .per file).

If there are already units on the board that are also in the Strategy list, these units will be counted as already created and will not be rebuilt.

We are breaking down each line of the Sample Strategy File (.ai) file located in the Docs folder of your Age of Empires CD. So print it out, if you want to follow along.

Sample .AI Strategy File Line – Starting your tribe

ID	Description	Qty	Parent	Limited Retrains
B109	Town_Center1 TownCenter	1	-1 Game	

Town Center – Has to start with one of these. The above line refers to ID# (unique to each unit/building/ research part of the .ai file), Description is computer name of the .ai file – scenario editor name of this part of the .ai file, Qty to be built, Parent is where it is being built from/at. Limited retrains are explained on the individual unit/building/research pages.

U83	Man Villager	6	109 Town Center	

Here the Computer refers to a villager as a man, which is being built in the Town Center. See how the Parent number of "Man" is the 109 ID# of the Town Center. Note that U has been used and this line call for 6 villagers to be built. If they are killed, the computer will always replace them during the game.

| B12 | Barracks1 | 1 | -1 |
| | Barracks | | Game |

Normally the first building you would build. This line pretty much explains itself. Why a Barracks and not a Storage Pit or a Granary? It is explained at the bottom of this page.

| T73 | Soldier-Inf1 | 2 | 12 | 1 |
| | Clubman | | Barracks | |

The Clubman is called Soldier-Inf1 in the .ai file, its being built in parent "12" which is the Barracks. See how it matches up with the B12 example above. The clubman will be trained up to the number of times specified in the "Limited Retrains" column. Example: T has been used for this line so a limited retrains value must be specified, in this case 1. Qty is set at 2. So the computer will build 2 clubmen, and once killed will replace them one more time (for a total of 4 in all)

Why put clubmen on limited retrains? Why not use U73 so they are always replaced? To have "space" towards the pop cap later. You want your computer player to build swordsmen and/or phalanx, and not build some clubmen/axemen in the Iron Age. Logic, no? :^)

| U83 | Man | 6 | 109 |
| | Villager | | Town Center |

Same as the above U83 example, we are just building more villager to take care of wood/stone/gold tasks.

We just went through a simple start for a computer player. One Town Center, One Barracks, two Clubmen and twelve villagers. Not a bad start for any early tribe.

Note also that there is no mention of Houses, Storage Pits and Granaries. Unless you write your .per files, the computer will take care of these and will build them as needed, hence why no mention of them in our little beginner .ai file.