

THE DISPLAY

All warfare is based on deception. -- SUN TZU

When a game is started up, it opens a number of windows, of which the most important is the area map (which therefore gets the largest window). Above the area map are several windows for status and notifications, and next to those is a turn counter and a list of all sides in the game. The middle right side has a list of all unit types, used for statistics display, while the lower right-hand corner has a map of the world (if the display is sufficiently large).

All of the *xcong* windows are actually subwindows of a main window with a patterned background you can see here and there. You can iconify and move the main window, and the subwindows will keep their relative positions. The largest of these is the map, which is a (typically) 30x30 section of the world in full detail. The view is scrolled around as necessary (remember that the world is cylindrical).

To the right and down, you see a map of the whole world. This view is like the close-in map, but units and units are rendered as solid blobs, since the world is too large to permit any detail. To assist in matching up the two different views, the world map includes an outline box indicating the position of the close-in view.

Three text displays are stacked at the top of the screen. The uppermost is about ten lines of notices about various occurrences, each prefixed by the number of the turn in which it was issued. The display scrolls. The next four lines are an information window that summarizes the status of the unit or unit at the current cursor position. It can display info about enemy things also, but of course the amount of information is less. Finally there is a one-line prompt window just above the map, in which all questions and prompts appear.

The list of sides playing appears in the upper right corner. Sides that have already lost appear with a line through them, while the currently moving side has a "*" next to it. Your own side name is highlighted or inverted. The name of the side, its host (if any), and the number of that side are shown. On color displays, the color of the number indicates the alignment of that side.

The X interface draws the area map as a number of hexagonal shapes with icons for units superimposed. Unknown territory is black. Your own possessions appear in black, neutral units in gray, and all enemies in red. If there is more than one enemy side, they are distinguished by the number of their side in the upper right corner of the icon. Not all enemy units will be visible; the chance of seeing one may be very low, or depend on viewing with the right type of unit. Monochrome screens display enemies and neutrals as inverted from your own appearance, and all enemy units/units have numbers, to distinguish them from the neutral units.

The curses interface displays each hex as two characters side-by-side. Terrain is a character representing the terrain, as are units. The second character in a hex is either the side number of an enemy, or an apostrophe for neutrals.

As mentioned previously, the view is a record of what has already been seen, but is not updated except in the immediate vicinity of your own units and units. In multi-human games, all screens will be kept up-to-date simultaneously, so that persons waiting for their turns can see enemy units moving around, units change hands, and so forth. The previous view of the hex is also remembered and will be described by moving the cursor to a hex in survey mode.

INPUT

Input may be supplied both from the mouse and the keyboard. Moving the mouse cursor to a screen position and clicking either button has the effect of issuing MoveTo orders to the current unit, which will be carried out until successful. There are two exceptions. The first is that if the mouse is on the unit itself, the unit sits where it is until the next turn (same as the ' ' command below). If the desired new position is adjacent, the unit will unconditionally move there - this is useful for attacking enemies. At present, there is no special meaning attached to particular mouse buttons.

As an alternative to using the mouse, the standard directions (h = West, l = East, y = NW, u = NE, b = SW, n = SE) can be used to specify movement. Uppercase versions of these makes the unit move forever in that direction. Letter directions are really only of use when the mouse fails, or for diehard Unix game players for whom the direction keys have been permanently wired in the brain! Note that in a hexagonal system, 'j'

and 'k' are not meaningful.

Any command may be prefixed by a single numeric argument (which may be positive or negative). Not all commands will use this number, while others need a number to know how often to repeat an order, or perhaps for some other reason. The "current unit" is the one being prompted about, while the "main unit" is the one occupying the hex itself (as opposed to its occupants).

Commands to give units orders typically default to a repetition of 100 turns (In some cases, this is meaningless, as in moving to a place):

- s Sentry; the current unit "goes to sleep", only wakes up by explicit command or when an enemy pops into view (the enemy unit won't necessarily be adjacent, if the unit on sentry duty can see far-off hexes).
- w Wake up; the unit's orders will be erased (whatever they were) and it will ask about its next order (not always immediately). This command interprets an argument as a radius for the effect of waking up; for instance, the default of 0 means to wake only the unit itself, 1 means to wake up adjacent units as well, 15 will wake up a screenful of units, and 999 will usually wake all units.
- W Wake all; both the unit and all its occupants will be woken up, as well as all of their occupants, recursively. The command is otherwise identical to 'w'.
- Space Sit; unit goes on sentry duty for exactly one turn, and will ask for a move in the next turn. Useful for waiting one or two turns.
- r Return; unit returns to nearest transport by shortest route. It will not return to transports with no room or no supplies. Most useful for aircraft, but works with any unit.
- m Move to a position; this is equivalent to mouse clicking, but can be used with mouse-less interfaces or to move further than one screen width. You will be prompted to do movement commands (either mouse or keyboard), then can use the space bar to designate the final destination.
- f Follow leader; follow another unit. The program will ask you to designate a unit to be followed, which must be one of your own. The interaction is identical with that for 'm'. Each turn the unit either attempts to move towards its given leader, and sits if it is within a couple hexes of the leader. Units will not follow themselves.
- F Follow coast; follow a coast line. This can be applied to any unit, although the unit will immediately wake up again if it is not next to some sort of terrain that it cannot move into. The command will prompt for a standard direction to decide how to start, then a contour-following algorithm will continually try to keep the unit adjacent to impassable terrain (thus armor might use this command to go around a mountain range or forest). Because the terrain is in discrete hexes, it is possible for the unit to get confused, but that's life.
- Z Patrol; set the current unit to go back and forth between two points. One point is the unit's current position, and the other will be prompted for. The roundtrip will be repeated for the number of times designated by the command's argument.

Commands for modes. There are only two modes defined at present: move mode (the default) and survey mode. Most commands work the same in both modes.

- z Survey mode; toggle into/out of survey mode. In survey mode, movement pushes a cursor and allows you to look at things. The other commands are still available; for instance, you can give a unit new orders or to set unit production.

Commands for general manipulation of units:

- d Delay move; unit's movement is delayed until all your other units have been moved, then it will be prompted for again. Useful in crowded situations. Delay can be used on any number of units any number of times during a turn.
- P Set unit production; will ask for a type of unit (if a choice possible) and then schedule construction for a unit of that type. Any partial production will be discarded.
- ^P Set unit production automatically; will use the machine algorithm to determine the product.

- I Idle; cancel production for the given unit and leave it idle for a while Default is 100 turns, argument to command overrides.
- C Call unit by name; prompts for a string by which current unit will be referred to. If string is empty, unit name will be removed. If this command is done when the cursor is on an empty hex, the string will become the new name of the whole side instead.
- D Disband; unit disbands and disappears from game. Not all units can be disbanded; for instance, most periods will not allow the voluntary destruction of a city. If an occupant is disbanded, then its transport will get any available resources, both those held as supplies and any used in making the disbanded unit (possibly not all, depending on the period's "efficiency" parameter).
- a Cycle through occupants; this can only be used in survey mode, and allows examination of each occupant and its suboccupants. The order of traversal is depth-first, and cycles through all units in the hex repeatedly.
- x Mark a unit; used with embarkation, below. Only one unit is ever marked at any one time.
- e Embark; put the current unit onto a random transport in the same hex. This is useful when you don't want to move transport or unit out just for the purpose of boarding. If the marked unit is in the same hex, it will be used as the transport. May given argument to have unit wait that many turns for a suitable transport. Once it is on board, it goes to sentry duty for the remainder of its time.
- g Give supplies; transfer all types of supplies from the current unit to its transport, if there is one. The default is to try to fill up the transport if possible. If an argument is supplied, it means to transfer exactly that quantity of each resource type. If the current unit is low on some type, then it will transfer half of what was requested. (Repeating the command transfers half again, and so forth.)
- t Take supplies; transfer all types of supplies to the current unit from its transport, if there is one. The default is to try to fill up the current unit, or to interpret the argument as the quantity to take. If the transport is low, then it will only transfer half of what was requested.
- O Set standing orders; will ask for type of unit to which standing orders will apply, then goes into a "teach mode"; the next input will saved as an order rather than being applied to some unit. When any unit of the appropriate type enters the unit with the standing order, it will be given those orders and carry them out. There is no way to cancel standing orders at present, but occupants can be set to wake up during entry. A unit receiving a standing order will automatically leave automatic mode, unless the standing order puts it in automatic mode. All standing orders are displayed before the unit type is prompted for. If no change is desired, then exit the command by typing the escape key.
- G Give unit; give the current unit to the side specified by the argument. If the side is invalid, then the unit is made neutral. Not all unit types can be given away.
- ^A Automate unit; allows the machine to control this unit until it is explicitly woken by the user. New orders are only given after the current orders have expired, allowing the user to give order in survey mode. A standing order can be left to automate a unit. Such an order may be combined with another order, but must be left as the second order for the same unit type. If both a normal order and an automate order are present, the regular order is carried out and then new orders will be given by the machine.

Commands for side manipulation:

- c Center; the list of units is sorted so that the one at the current cursor will move first, and others move in concentric circles outward. This is useful for concentrating on one particular area and reducing the amount of map redrawing.
- M Message; send a message to another side. The side is specified by giving its number as a prefix to the command; if the number is not the number of a side, then your message will be broadcast to all sides (including yourself). You may type in a message up to the length of the prompt window. Backspacing is available. When a newline is entered, the message is sent immediately to the destination. Specially recognized messages must be typed exactly, with no other words or characters in the message:

- war Declare war. Only one side need do this. This involves all allies on both sides immediately.
- neutral Declare neutrality. Both sides must send this message to each other.
- alliance If two sides send this message to each other, they become formal allies. The display changes to reflect this, as do things like wakeups, etc. All sides in the game will hear about the alliance.
- briefing Sends the view of all of your units to the other side. Useful for allies, as well as to convince a victim that further resistance is hopeless. Of course, the victim's position might not be so hopeless after all, in which case you've given away all your secrets!
- . Recenter; put the hex with the cursor in it in the center of the screen.
- ^F Follow Action; toggle look mode. Look mode puts any changes in the view on the screen when it is not your turn. The mode window will be followed by a "L" in look mode.

Commands for game control.

- X Resign; resign from the game, (asks for confirmation first). The effect is the same as losing.
- Q Quit; terminate the game for everybody (asks for confirmation first). Note that although this can be used even in multi-human games, applying it without prior consent of the other players is definitely anti-social!
- S Save game; record the game state into a file and exit (asks for confirmation first). The saved game is ASCII and unprotected, so it's possible to "checkpoint" games and engage in other kinds of cheating. The game exits once it has been saved. To restart, start up the program without any command line arguments, and in the directory where the save file is located. If players are specified on the command line, then they override the saved player data. This is one way to switch sides; for instance, saving from "xconq" and restarting with "xconq -r -e 1 \$DISPLAY" has the effect of you switching sides with the machine.
- A Add player; add a new player to the game (not implemented yet).
- o Options; set various options. Each option is a single character. Options at present include:
- g Graph; toggle between text and bar graph displays about the current unit's supplies, hit points, etc.
- d Display mode; cycle between four different color display techniques. The curses interface also has two display modes (one or two terrain chars per hex), but you still have to cycle between four modes.
- i Invert; invert foreground and background colors everywhere (monochrome only).
- w Width; set the width of the map display to be the value of the argument. This is measured in hexes.
- h Height; set the height of the map display to be the value of the argument. This is measured in hexes.
- n Notices; set the number of notice lines at the top of the screen.
- r Robot; convert yourself into a machine player. This asks for confirmation. If there are no other human players, ^C is re-enabled, so you can terminate the program. This may be reversed by typing Escape. (Not functional in curses version.)
- m Monochrome; This has the bizarre behavior of converting a color display into its monochrome equivalent. Actually intended for debugging, but pretty flashy if you're bored.
- b Start Beep Time; A beep will sound at the start of your turn if it is more than this many seconds since your last turn.

Information commands.

- ? General help; show a sequence of help screens, starting with a list of commands, then a display of icons, then any news, then general info about the period, then the characteristics of each unit (as for '=' below). You may page back and forth through the screens. This general help is available in both move and survey modes. Some specialized prompts (such as for unit type) will also recognize

- '?', but will only supply more details about possible answers to the prompt.
- / Identify; display a short phrase indicating what is being seen in the hex at the current cursor position. This works in all modes, and is useful for deciphering unusual colors or icons.
 - = List the characteristics of a type of unit. It will prompt for the type, then format all the period-specific details into a semi-readable summary. To get a hardcopy of this, use 'p'.
 - p Print; dump all the characteristics of all unit types into a file "parms.xcong". This file may be printed, and is very useful for learning about a period. It will include designer's notes about the period which cannot otherwise be obtained. Also print the current view, and a list of the commands.
 - v View current unit; display a flash that should be bright enough to catch the eye and make it easier to see where the current unit is.
 - V Version; display the current version and other useless information. Be sure to include the version number when reporting bugs.
 - ^R, ^L Redraw the screen. Redrawing happens automatically most of the time. Keep in mind that *xcong* is a single program, despite opening multiple screens, and attempts to redraw may be ignored for awhile. An argument to redraw will erase the views of mobile units that have not been seen in as many turns as the argument. ^R defaults to erasing units we haven't seen in 10 turns.
 - T, ^T Find a unit. T always prompts for a unit type while ^T will use the current unit type, if any. This will find a unit of the given type, or the next for ^T. An argument to the command gives the number of a particular unit. With no argument, ^T can be used to cycle through all units of one type.
 - # Determine distance; will prompt for another location and will print the distance to that location.

Additional commands are available for building scenarios, and are described in the customization document.

PERIOD HELP

The help screens describing unit characteristics include an enormous amount of information. In fact, a period that utilized the full range of capabilities would be too complicated to play, even as a computer game. As a result, the help screen are rather compact and cryptic. For any single unit, there are three tables, summarizing the unit's relationships with resource, terrain, and other unit types. The numbers in parentheses are default values that fill in any blank entries.

Resources:

- ToBui Amount of resource needed to build the unit.
- Prod Amount produced each turn under best conditions.
- Store Amount that can be carried around.
- Eats Minimum amount consumed during a turn.
- ToMov Amount consumed by moving one hex.
- Hits Amount needed to hit another unit.
- HitBy Amount needed to be hit by another unit.

Terrain:

- Slowed Move penalty for entering hex with the given terrain type. Default is negative, which prevents movement entirely. 0 means can move in at maximum speed.
- Rand% Chance (in hundredths of a percent) to move randomly in the terrain.
- Hide% Increased difficulty for others to see unit in this terrain.
- Defn% Increased difficulty for others to hit unit in this terrain.
- Prod% Productivity of this terrain for resource production.
- Attr% Chance (in hundredths of a percent) for attrition to occur.
- Acnd% Chance (in hundredths of a percent) for an accident to occur.

Other units:

Hit%	Chance to hit a unit of that type.
Damg	Number of hit points of damage done when hit successful.
Cap%	Chance to capture unit.
Guard	1 if capturing unit converted into garrison.
Pro%	Percentage of hit that is prevented from hitting the unit type that occupies, or decrease in chance of hit on unit type transporting this unit.
Holds	Number of units that can be carried.
Enter	Extra moves consumed by entering the transport type.
Leave	Extra moves consumed by leaving the transport type.
Mob%	Transport mobility when carrying unit type.
Bridg	1 if can attack unit type across impassable terrain.
Build	Basic construction time for the unit type.
Fix	Time to repair one hit point of damage to the unit type.

The customization document has additional explanation for some of these (rather obscure) parameters.

HINTS

Generally in war the best policy is to take a state intact; to ruin it is inferior to this. -- SUN TZU

Attack where he is unprepared; sally out when he does not expect you. -- SUN TZU

There has never been a protracted war from which a country has benefited. -- SUN TZU

The works of Sun Tzu and Clausewitz say nearly all there is to be said on strategy in general. *Xconq* strategy is fairly close to real strategy.

The most important consideration is to conceal your own forces and movements as much as possible. De-coys and feints are worthwhile if they don't draw critical strength away.

Secondly, don't rush to attack with weak forces. Especially over long distances, the defender has the advantage. Wait until you have assembled enough to take and hold a piece of territory, then allow some extra, just in case.

Make a plan, and have some contingency plans ready as well.

Be ready to take advantage of opportunities.

PERIODS

Xconq starts with one period compiled into it. It can also read and interpret other periods. Typically the installer will have built in the period called "standard", for which the description is included below. Other periods include Napoleonic times, Ancient Greece, a somewhat silly futuristic period, an even sillier "Star Wars" period, whose sole reason for existence is to watch death stars blast cities, a "flattop" period featuring carriers, some simulations of board games, and more.

The standard period represents units of about 1945, from infantry to atomic bombs. This is the most familiar, which makes it easier to play, but also more controversial, since historians have many conflicting theories about which kinds of units were most effective. This set has been most influenced by other empire games (thus the greater variety of ships), and the numbers have been honed by extensive playing experience at Utah.

Infantry. The infantry division is the slowest of units, but it can go almost anywhere. It is also quick to produce. Infantry is the staple of campaigns - a little boring perhaps, but essential to success.

Armor. The armor division is highly mobile and hits hard. Unfortunately, it is limited to operating in open terrain - plains and desert. It also takes longer to produce. Armor can last twice as long in the desert as infantry. Both armor and infantry can assault and capture units; they are the only units that can do so.

Fighters. A fighter is a squadron or wing of high-speed armed aircraft. Their fuel supply can be gotten only at units, towns, and bases, so they must continually be taking off and landing. Fighters are not too effective against ground units or ships, but they eat bombers for lunch. Fighters are very good for reconnaissance - important in a game where you can't always see the enemy moving!

Bomber groups. Bombers are very powerful, being capable of destroying any unit. Attrition rate in such activities is high, so they're not a shortcut to victory! Bomber performance against other units is less impressive, and of course fighters love to munch on them. Bomber range is greater, but they are slower, taking several turns before they must land. They are also a last-ditch method to escape from a continent if no seaports are available.

Destroyers. Destroyers are fast small ships for both exploration and anti-submarine activities.

Submarines. The favorite food of submarines is of course merchant shipping and troopships, and they can sink troop transports with one blow. Subs can't be seen by the other side, although their presence might be suspected. Subs are always highly vulnerable to attack by bombers or even fighters.

Troop transports. This is how ground units get across the sea. They can defend themselves against ships and aircraft, but are basically vulnerable. They're not very fast either.

Aircraft carriers. Compensates for the fighter's limited range by providing a portable airport. Carriers themselves are sitting ducks, particularly with respect to aircraft. Fighter patrols are mandatory.

Battleships. The aptly named "Dread Naught" has little to fear from other units of this period. Subs may sink them with enough effort, and a group of bombers and fighters are also deadly, but with eight hit points to start, a battleship can usually survive long enough to escape. Battleships are very effective against units and armies, at least the ones on the coast.

Atomic bombs. The Final Solution; but they are not easy to use. A bomb takes a long time to produce, moves very slowly by itself, is easily destroyed by other units, and reduces the range of bombers that carry it. The plus side is instant destruction for any unit of any size!

Bases. To simplify matters, this can serve as a camp, airbase, and port. Bases cannot build units, although they can repair some damage.

Towns. Towns are the staple of territory. They produce units at the same rate as cities, but are easier to capture.

Cities. Cities are very large, powerful, and well defended. They are basically capital cities, or something in a comparable range. (New York and San Francisco are cities, Salt Lake City and San Antonio are towns.) A city is worth five towns, territory-wise.

Current thinking about optimal strategy for this period differs. In general, blitzkrieg works, and can win the game in a hurry. The problem is to muster enough force before striking. One full troop transport is not enough; the invasion will melt away like ice cream on a hot sidewalk, unless reinforcements (either air or land) show up quickly. Air cover is very important. While building up an invasion force, airborne assaults using bombers and infantry can provide useful diversions, although it can be wasteful of bombers. Human vs human games on the default map generally last about 100 turns, usually not enough time or units to build atomic bombs or battleships, and not a big enough map to really need carriers (although bases for staging are quite useful.)

CHANGES FROM VERSION 1

Aside from the significant changes (hexes, simultaneity, period descriptions), there are a number of smaller changes that will affect experienced players:

The command to construct a base is now the same as the general build command '**P**' (since bases are units like any other).

The random movement command is gone.

The disband command is now '**D**' instead of '**d**'.

There are probably others I have forgotten about.

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