Introduction

Disclaimer:

CraftGen is a utility written by the guys of SpiderweBB.   It generates map files for WarCraft II : Tides of Darkness.   WarCraft II is a registered trademark of Blizzard Entertainment.   SpiderweBB is not affiliated with Blizzard Entertainment.   Blizzard Entertainment does not support or endorse CraftGen.   In case we haven't made it clear...Blizzard Entertainment had nothing to do with CraftGen.   CraftGen is NOT a standalone product.   You must have purchased a copy of Warcraft II in order to use CraftGen.

Why We Wrote CraftGen:

WarCraft II is great fun, but there is a problem in that if you are playing a scenario that someone else has already played they have a decided advantage.   And part of the fun of playing a game of WarCraft II is the discovery process in exploring the map. Blizzard Entertainment thoughtfully provided a map editor which allows you to create maps, but there is no surprise if you create them yourself.   Sure, you could download PUD files from numerous places, but sometimes even the names of the PUD files give you a clue what to expect.   We felt the answer was to have a map generator create new maps for WarCraft II on demand.   We wanted to provided that same sense of excitement we felt when we first cracked the shrinkwrap of WarCraft II.

That is how it began, but the more we experimented the more we found to control.   We decided to share with you some of the stable "features" we found.   Some of them are just for fun, but some of them really add a new twist to the game.

Now that we are finally done writing this program we are really looking forward to going back and actually playing the game.   We wish to extend our fondest wishes to Blizzard Entertainment for producing such a fun game.   All of the work we put into CraftGen was inspired by our obsession for WarCraft II.

Shareware:

CraftGen is shareware.   We are releasing a fully functional trial version that allows you to generate extra small maps.   If you would like to create maps of other sizes you must register CraftGen.   But don't worry...it's very inexpensive.   It's our goal at SpiderweBB to provide you with quality software at prices that you can afford. Please see the registration screen in CraftGen or the registration topic in this help file for more information.

Help file generated by HelpWriter for Delphi.

Main Menu Tour

Drop Down Menu:

File

Exit is the only option available on the file menu.   If you choose this option, CraftGen will close.

Preferences

Save Current Settings will copy all of the values you have entered into a configuration file which can be loaded again later.   For example, you could have a configuration well suited for naval battles or where the humans have supply problems. If you have a configuration called *default.cgp* CraftGen will load it as soon as you start the program.

Load Configuration will load a previously save configuration file.   Note that CraftGen configuration files will have an extension of *cga*.

Show Warnings will enable messages telling you that CraftGen could not do everything you asked it to do.   For example: If you set the mountains to 100% it is very unlikely that you will be able to place eight players.   If Show Warnings is enabled, it will tell you that it couldn't place all eight players.

Compensate for Unplaced Units directly relates to the STARTUP UNITS screen. If you tell CraftGen to give everyone max units and it cannot do it, based on the amount of buildable land available,   it will give you the equivalent value in lumber, gold, and oil.

Help

Contents will activate this help file.

About will tell you about CraftGen and <u>SpiderweBB</u> and display copyright information.

Registration will bring you to the registration screen.   This screen provides a place for you to retrieve your CraftGen <u>serial number</u> and also a place for you to enter the <u>keycode</u> we will provide for you when you register.   Note that once you have entered a valid Key Code CraftGen will not allow you to change the value.   This should prevent you from accidently deleting your code and unregistering your copy.

<u>Quick Start</u>

This button brings up the Quick Start page.   It allows you to set the map size, climate, number of players, number of human controlled players, the balance between water and land, and the map description.

<u>Player</u>

This button brings up the Player page.   It allows you to set the race and controller for each player, and the A.I. for the computer controlled players.

<u>Resources</u>

This button brings up the Resources page.   It allows you to set the number of gold mines and oil patches on the map and the amount of gold and oil in each.

Upgrades
This button brings up the Upgrade Costs page.   It allows you to set the Step, Gold, Lumber, and Oil costs for each upgrade.

Startup Resources
This button brings up the Starting Resources page.   It allows you to set the amount of gold, oil, and lumber for which each player will start.

Startup Units
This button brings up the Startup Units page.   It allows you to set the difficulty setting for each player.

Units
This button brings up the Units page.   It allows you to configure every attribute of each unit type.

Land
This button brings up the Land page.   It allows you to define the geographical aspects of the map file.

Random Method
This button brings up the Random Method page.   It allows you to choose how random numbers will be generated when needed for your map.

Set ALL Random
This button sets all of the applicable controls on the current page to be random. Note that if the current page uses drop-down list boxes, such as Units or Upgrades, EVERY item in the list will be set to random.

Set NONE Random
This button sets all of the applicable controls on the current page to not be random.   Note that if the current page uses drop-down list boxes, such as Units or Upgrades, EVERY item in the list will be set to not be random.

Reset Defaults
This button will reset all the values to WarCraft II defaults.

Mayhem
This button sets everything to be random that can possibly be random.   Note that there is no Anti-Mayhem button, so be careful when using this feature.   As the results of a completely random map can be of questionable value, use this feature cautiously.

Generate Map

This button activates the actual map creation process.   You will be prompted for a filename for the purpose of saving the map.

Quick Start

The Quick Start screen allows you to tell CraftGen the most basic of map configuration details and hit the Generate Map button for a quick WarCraft II fix. Generating a map in this fashion will cause CraftGen to use default values (either preset defaults or those from a saved configuration) unless you first hit the Mayhem button. Note that some of the functionality of these controls may be found on other screens and if you change the values on one screen it will affect the other.

Map Size

This determines how big the map will be after it is generated.   An extra small map is 48x48.   A small map is 64x64.   A medium map is 96x96.   A large map is 128x128.

Climate

Climate or terrain...whatever you want to call it...this determines which tile set WarCraft will use for the map.   As far as I can tell it does not affect the way the game plays, just how it looks.

Number of Players

This represents the total number of players on the map, both human and computer controlled.   There must be at least two players, but no more than eight are allowed.

Number of Human Controlled

This represents the number of players that will be controlled by humans.   It can't be less than 1 and it can't be greater than the Number of Players.

Water/Land

This slider bar represents the balance between land and water on the map.   The more land you have, the less water you have.   Note that this ratio is affected by other controls.   See the LAND help page for more information.

Map Description

This text box gives you 31 characters of free text to name your CraftGen generated map anything you'd like!   Just imagine the possibilities!   Or you can leave it blank.

Help file generated by HelpWriter for Delphi.

Player

This screen will tell you the default player settings for all eight players at a glance.

Race

There are two choices...Orc or Human. If you choose random CraftGen will choose for you. I am not going to identify the differences between the races or tell you which one is better for what. Buy a strategy guide for that information or check out one of the many fine <u>WarCraft II</u> web sites.

Controller

This determines whether the player is Human or Computer controlled, and if the computer controlled players need to be rescued (both active and passive rescues are supported).

A.I.

A.I. (a.k.a. Strategy) tells computer controlled players to attack by land, air, or sea or just be passive. It has no effect on human controlled players.

Help file generated by HelpWriter for Delphi.

Resources

This screen tells CraftGen how resource-rich to make your map.

Gold Mines

This controls the number of gold mines to be placed on the map.   One might suggest at least one gold mine per player.   Or not...heh heh heh.

Gold Amount

This tells CraftGen how much gold to place in each mine.

Oil Patches

This controls the number of oil patches to be placed on the map.

Oil Amount

This tells CraftGen how much oil to place in each patch.

Help file generated by HelpWriter for Delphi.

Upgrades

When good isn't good enough...upgrade!   This screen allows you to determine the resource and time costs for each type of upgrade.

Choose the upgrade you want to examine or change from the drop-down box.

Step Cost

The amount of time it will take to enable the upgrade.

Gold Cost

The amount of gold it will take to enable the upgrade.

Lumber Cost

The amount of lumber it will take to enable the upgrade.

Oil Cost

The amount of oil it will take to enable the upgrade.

Note: If you choose SET ALL TO RANDOM it will set EVERY random box for EVERY type of upgrade.   The reverse is also true.   If you choose SET NONE TO RANDOM it will remove EVERY random indicator for EVERY type of upgrade.

Startup Resources

Use this screen to determine the amount of resources with which each player begins the game.

Gold

This indicates the amount of gold with which each player begins the game.

Lumber

This indicates the amount of lumber with which each player begins the game.

<u>Oil</u>

This indicates the amount of oil with which each player begins the game.

Help file generated by HelpWriter for Delphi.

Startup Units

   This screen will allow you to determine the amount of units with which each player will begin the game. Think of it as a difficulty setting. Note that CraftGen will do its best to place all of the units and buildings as indicated by the difficulty levels, but if it cannot place them all it will award the remaining resource value in gold, lumber, and oil to each player.

Units

This screen will allow you to configure every aspect of each unit type. First, choose a unit type from the drop down box at the top of the screen. Then review or edit each attribute as you see fit.

Visible Range
This determines how far the unit can see.

Hit Points
This determines how much damage a unit can take before it is eliminated.

Magic Points
This determines how much power a magical creature can exert before it can no longer cast spells.

Build Time
This determines how long it takes to build the unit.

Gold Cost
This determines how much the unit will cost in gold.

Lumber Cost
This determines how much the unit will cost in lumber.

Oil Cost
This determines how much the unit will cost in oil.

Attack Range
This determines how far away the unit can be away and still attack an enemy.

Basic Damage
This determines how much crushing damage the unit will inflict upon an enemy in the event of a successful attack.

Piercing Damage
This determines how much piercing damage the unit will inflict upon an enemy in the event of a successful attack.

Armor
This determines the amount of armor that is protecting the unit from damage.

Land Attributes

This screen controls how the geography of the map will appear.   A bit of explanation is in order.   Please read all of the text on this page so that you will understand the big picture.

Water/Land

This determines the *initial* balance between land and water.   It determines whether the map will consist of continents, islands, or no land at all.

Buildable Land

Of all the land available, this control determines how much of that land will be available to build upon.   It's a percentage of the total land.   Note that this does not guarantee there will be enough space to build a structure.   It simply determines the percentage of land that is the right *type* to build upon.

Rivers

This control dictates how much of the map will be devoted to rivers.   It completely ignores the water/land ratio.   It cuts through land like a hot knife through butter.   Choose *enable multiple rivers* if you prefer several smaller rivers as opposed to one giant river.

Lakes

This control dictates how much of the map will be devoted to lakes.   It completely ignores the water/land ratio.   It cuts through land like a chainsaw through cottage cheese.   Choose *enable multiple lakes* if you prefer several smaller lakes as opposed to one giant lake.

Forest

Of all the land available, this control determines how much of that land will be devoted to forest.   It's a percentage of the total land...more or less.

Mountains

Of all the land available, this control determines how much of that land will be devoted to mountains.   It's a percentage of the total land...more or less.

Enable Shallow Water

This is an area that looks like water, but your boats will not be able to cross it because it is too shallow.   In fact, your land units can walk across it.   This is like Reverse Physics, but in occurs in small patches.   Enabling this feature does not guarnatee it will be there.   It enables the possibility of shallow water.

Enable Swamp Land

This is an area that looks like land, but you can't walk across it.   In fact, your sea

units can float across it.   This is like Reverse Physics, but is occurs in small patches.
Enabling this feature does not guarantee it will be there.   It enables the possibility of
Swamp Land.   (NOTE: This has nothing to do with the Swamp tile set offered in
Blizzard's expansion pack.)

Reverse Physics

Walk on water, sail boats across land...it's wacky!

Enable Secret Mountain Passes

It looks like a mountain...but wait a moment...I can send a catapult through it to
attack the unsuspecting humans safely nestled within the valley.   Basically this feature
enables the *possibility* that a pathway exists through a mountain range.

Black Map

It is a normal map in every way...except that you can't see a darn thing!   That's
right, all the tiles are black!   A Gimmick, maybe...but a cool gimmick and fun to try at
least once.

Help file generated by HelpWriter for Delphi.

Random Method

There is actually a very interesting story behind our random number algorithms. There we were in Madison, Wisconsin on a business trip. We had hauled our computers 250 miles so that we could work on CraftGen after hours. We started talking about how to best generate random numbers. I had an idea (the Abraham method) and Jim had an idea (the Siegienski method). The Abraham method is variation based on percentage of the seed value limited by proximity. The more exotic Siegienski method uses complex formulas and algorithms to deduce a number also based on percentage of the seed value. We couldn't decide which method to use, so we included both. What the heck. And as long as we were going to include two ways of generating random numbers, we thought we might as well include a third. The third is a boring method that just pops a number magically out of thin air. And if that isn't going too far, we also allow you to randomly choose which random method to use.

I guess the story wasn't that interesting. But if you haven't had enough, I'll explain the differences between the methods.

Ranged Variance (a.k.a. the Abraham method)
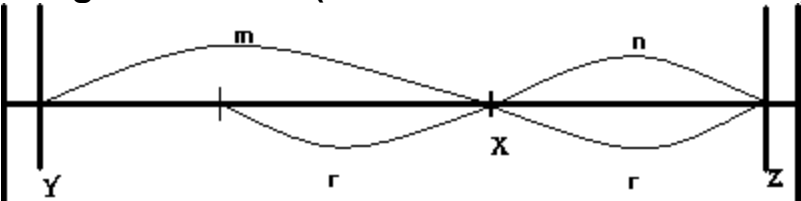
This method of random number generation will produce a number based on the default, but varying in equal quantities on either side. In the example above Y represents the minimum, Z the maximum, and X the default value for a given number type. The difference between X and Y is stored in M and the difference between Z and X is stored in N. The values in M and N are compared and the least of these two values is placed in R. R represents the greatest variation from the default in either direction. This number is then modified by the 'Variation Percentage'. For example, if the 'Variation Percentage' is set to 10%, the variance would be X plus or minus R(.10).

Weighted Variance (a.k.a. the Siegienski method)
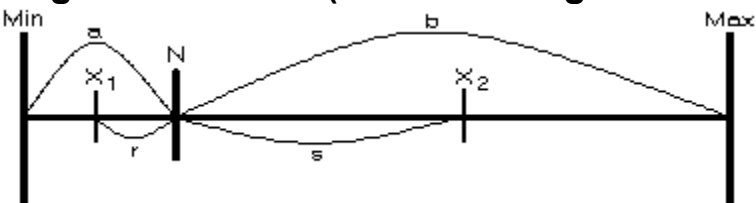
This method of random number generation also produces a number based on the default. This method differs greatly from the Ranged Variance method. In the example above N represents the default value, which is stored in a. The difference

between the Max value and N is stored in b.   The 'Variation Percentage' is applied to the values a and b resulting in X1 and X2 respectively.   The value r is the result of N - X1 while s is the result of X2. - N   The difference between X2 and X1   (or r + s) is the full range of variation.

For example: 'Variation Percentage' = 10%
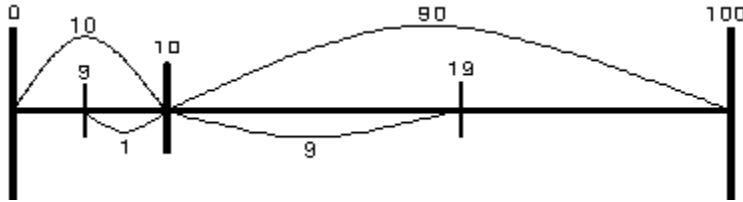
The range of variation on a scale of 0-100 with the default being 10 is between 9 and 19.

Raw Variance

The Raw Variance method uses the full range of the item in question to determine its random value.   So if the item is 'Land Mass' with a range from 0-100, the Raw Variance method would randomly pick a number from 0-100 without any limitations.

This method is very unpredictable, and could create difficult maps that are near unplayable.   Think of it as a challenge.

Registration

CraftGen order processing is being handled by Kagi.   Please go to the Help menu and choose the Registration option.   Write down your serial number and include it with your registration information.   Run Registration.EXE sitting in your CraftGen directory.   As soon as we receive your registration form we will send out your Key Code via e-mail or postal mail.

Registration is $15 and includes free upgrades (via web).

Thank you for supporting the concept of Shareware!
    --Jim and Howard

Help file generated by HelpWriter for Delphi.

Infrequently Asked Questions

Nobody has asked us any questions.   Well, at the time the help file was created nobody but the guys at <u>SpiderweBB</u> has seen CraftGen.   But we think we can guess what questions are boiling in your minds.

Why didn't you just use a tabbed-page interface?
        We tried!   But it made CraftGen use 100% of system resources (even on 95!).

I love CraftGen so much!   Won't you please take more than $15?
        Absolutely not.   Well, okay.

Are the rumors of the possible acquisition of LucasArts by SpiderweBB true?
        These rumors are completely unfounded.

If you could be any kind of animal, what would you be?
        Howard :   blue...no yellow!
        Jim: I would be the bear from the Snuggle Fabric Softener commercial

Why is my map nearly all water when my land is set to 100%?
        How many times do I have to tell you?   Read the *complete* topic on <u>Land</u> in this helpfile!

How can I have 100% buildable land, 100% forest, and 100% mountains enabled at the same time?
        Er...ah... I'll let Jim explain this.

This is to clear up the confusion on how the map properties are
figured once and for all.
There are 7 properties:
        1 Land
        2 Buildable Land
        3 Rivers
        4 Lakes
        5 Lumber
        6 Mtns
        7 Decorations

        Land- this is the percentage of the map that is land.   this is
                the first calculation.   Land is Beach, or Ice.

        Buildable Land- this is a percentage of land from the previous
                calculation.   this is figured second.   Buildable land is

Grass, or Snow.

Rivers- this ignores all other values and cuts a river(s) through
whatever might be in the way.   the value determines the size
or quantity of rivers. this is to guarantee a river.

Lakes- this also ignores all other values and cuts holes of water
in the map.   the value dertmines size and quantity of lakes.
this is to guarantee lakes.

Lumber-   this is a percentage of Buildable Land.   Lumber is Trees.

Mtns- this is a percentage of Land subtract Buildable Land.   Mtns
are Mountains.

Decorations- this is a percentage of decorations on Land and
Buildable Land.   Decorations are pebbles, rocks, signs and
other various pieces.   Decorations do not restrict movement
or buildability and are for aesthetic purposes only.

(wasn't that easy?   -Jim)

When is the Macintosh version coming out?
Soon!

Hey!   Why do CraftGen maps crash the editor supplied by Blizzard?
Hey!   Why do CraftGen maps not work as expected after I loaded them into the editor supplied by Blizzard and resaved the map?
CraftGen exploits features that the editor supplied by Blizzard is not capable of recognizing.   So don't bring CraftGen maps into the editor and you won't have these problems.

Help file generated by HelpWriter for Delphi.

Software Piracy

      SpiderweBB makes it sound so impersonal.   But SpiderweBB consists of two guys, Jim Siegienski and Howard Abraham.   We both worked very hard on nights and weekends to bring you this quality product.   Our wives barely saw us for five months. We don't expect your pity, but if you are using a registered version of CraftGen we do expect your money.   We feel that $15 is certainly a fair price and just about everyone that coughed up the cash to buy WarCraft II can afford this small amount to extend the life of this awesome game.   Thank you for not using a pirated or cracked version of CraftGen.

Help file generated by HelpWriter for Delphi.

Credits

Original Concept
> Jim thinks it was his idea.   I think it was my idea.   It was probably one of our many synergistic moments.

Win95 Version
> Howard Abraham

Win3.1x Version
> Jim Siegienski

That One Thing
> Jim Siegienski

The Other Thing
> Howard Abraham

Hacking the PUD (this will look good on a resume)
> Howard Abraham

All the boring busy-work that Jim didn't want to do
> Howard Abraham

Art and Music (Most of which you don't get to see or hear)
> Jim Siegienski

Serial Number / Key Code Security
> Howard Abraham

Unit Placement
> Jim Siegienski

Unit Placement Smoothing Technique
> Howard Abraham

Geography
> Jim Siegienski

Master of Recursion (used for A.I. and unit placement)
> Howard Abraham

Devising a Method of Virtual Recursion that Doesn't Blow the Stack on

Windows 3.1
    Howard Abraham

Mapping the Tile Set
    Jim Siegienski

Random Number Generation
    Howard Abraham
    Jim Siegienski

Slow File Writer
    Howard Abraham

Fast File Writer (the assembly version)
    Jim Siegienski

Rewritten File Writer (32-bit only)
    Howard Abraham (written in Delphi, but inspired by Jim's assembly version)

SpiderweBB couldn't have done it without the following products:

WarCraft II by Blizzard Entertainment
Delphi 1.0 and 2.0 by Borland
UltraEdit-32 by Ian D. Mead
HelpWriter for Delphi by Teletech Systems
Questek Application Installer by QUESTEK Marketing
http://www.delphi32.com
TrackBar for Delphi v1.0 by Colin Wilson (16-bit version)
Guage95 for Delphi v1.0 by Vitaly Monastirsky (16-bit version)

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Technical Support

At this time technical support is only available via e-mail.
Send your support questions to:

Jimware@kagi.com (Jim Siegienski)

or

Freeze@kagi.com (Howard Abraham)

Did you find a bug in CraftGen?   The best way to report it
is to save the configuration in which the bug occurred and
mail the .CGP file to us along with a description of the bug
and which version of CraftGen you are using (cg32v10 or cg16v10).
The first one to report the bug will be credited in our next
release.

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License Agreement

This software is presented "AS-IS" with no warranty or guarantee given or implied.   Part of the reason we allow you to try it before you buy it is so that you can see if it works on your system.   No refunds or exchanges will be permitted.   The unregistered version of this software may be freely distributed as long as all the accompanying files are transferred at the same time.   The <u>registered</u> version is registered to be used by one person per license purchased.   It may only be used on one computer by that person.

<u>SpiderweBB</u> (Howard Abraham and <u>Jim Siegienski</u>) takes no responsibility for the use or misuse of this software.   While effort has been made to assure this software is free of bugs and defects, it probably has some anyway.   SpiderweBB takes no responsibilty for damage or loss caused by CraftGen.   Use CraftGen at your own risk!

Help file generated by HelpWriter for Delphi.

Tips and Tricks

Use the Random function sparingly when playing a serious game.
While being able to randomize every aspect of the game is part
of what makes CraftGen a great utility, you could easily produce
maps that are nearly unplayable due to too many random elements.
For example, if you give all players Starting Gold of RANDOM,
make the cost of farms RANDOM, and assign the number of gold
mines as RANDOM, CraftGen could produce a map with zero gold
mines, zero starting gold for every player, and farms that cost
10,000 gold each.

Here's a fun thing to try: Choose the extra-small map.   Adjust
all player starting units to Maximum.   Make sure you have the
number of players set to eight (in any combination of Orc and
Human) with one human controlled player and seven computer
controlled players.   This throws will cause CraftGen to produce
a Boatwar Armageddon map.   Try running it and let me know if
you last longer than 60 seconds before all of your boats are
fish food.

Have you saved your configuration lately?   CraftGen has the
ability to save all of your screen settings so that they may
be loaded again later.   This allows you to have custom
templates.   For example, you could have a template for a
one-on-one two-player game that takes place on a series of
islands.   Another template could be for rescue missions.   You
can trade these templates with your friends.

Did you find a bug in CraftGen?   The best way to report it
is to save the configuration in which the bug occurred and
mail the .CGP file to us along with a description of the bug
and which version of CraftGen you are using (cg32v10 or cg16v10).
The first one to report the bug will be credited in our next
release.

Glossary

C
complex

E
exotic

H
Howard Abraham

J
Jim Siegienski

K
keycode

M
Madison
Mayhem

O
obsession
Oil

P
PUD

R
random number algorithms
randomly choose which random method to use

S
serial number
shareware
SpiderweBB

W
WarCraft II

complex
So complex you couldn't hope to understand.   Or something.

exotic
That's a direct quote from Jim!

Howard Abraham
Co-Founder, President, CIO, Senior Design Architect, and Lead Programmer

Jim Siegienski
Co-Founder, President, CIO, Senior Design Architect, and Lead Programmer

keycode

The keycode is the number we send to you after you register. It authorizes you to use the full power of CraftGen and make maps of all four sizes.

Madison
Superitems.   Print Groups.   Ha!   I see through your ploy to confuse those not wise to your ways.

Mayhem
Beware!   Mayhem does what the name implies.   There is the easiest way to produce a map that is unplayable.   But if you are tired of the same old WarCraft II grind...if you have memorized every stat and have mastered every strategy...Mayhem could be just what you are looking for.   Just don't come whining to us if your peons cost 10,000 lumber to build.

obsession

Obsession for Men...Howard's favorite cologne

Oil

Black gold.   Texas tea.

PUD

PUD refers to the extension Blizzard Entertainment gave their map files.   Was this the best name they could think of?

random number algorithms
Oh!   Don't get me started!

randomly choose which random method to use
If you think we don't have lives, you are right.

serial number
This number is unique to your computer.   It identifies you as the authorized user for your copy of CraftGen.

shareware

When we say "Shareware" we mean you should share the UNREGISTERED version with your friends, neighbors, and anyone else who will take a look.

SpiderweBB
Jim Siegienski and Howard Abraham

WarCraft II

WarCraft II : Tides of Darkness is a trademark of Blizzard Entertainment