Battlezone Magazine

Battlezone II: The Programmer

By Jonathan "Lucky Foot" Snyder

In 1999 Pandemic Studios and Activision came out with Battlezone II: Combat Commander. A Game that was based on the critical acclaimed Battlezone and placed the player in the seat of a futuristic tank and battled unknown aliens across the galaxy.

The game has been available to the public for 7 years and a tenacious band of players still keep the multiplayer buzzing and modders keep bringing new worlds and new adventures to the gamers. But the question, what about the programmers, the men behind the creation of the game itself? So, Ken Miller, one of 5 programmers on the original Battlezone II graciously agreed to sit down for an interview. Here is his story:

Jonathan: So Ken, what first originally got you interested in programming games?

Ken: I've wanted to make games since I first encountered a video arcade in the early 1980s, and Pac Man in particular. I was about 8 or so at the time. I wanted to play arcade games every time I got a chance, even though I wasn't very good. I even had Pac Man bed sheets until they wore out. At home, I would draw out game concepts, usually clones of existing arcade games.

Jonathan: When you started working for Activision what game was the first that you got to be a part of?

Ken: Battlezone 1. I worked on Planetfall 3D for about a month before it got cancelled, then moved onto a project called "Badlands", which became "Warriors of the Wasteland", which became "Lost Brigade", which became "Battlezone". The action-strategy hybrid was a constant, even as the theme changed.

"Badlands" and "Warriors of the Wasteland" featured a lot of absurd and even comical elements, beginning with the protagonist's name: Slade Vengeance. It got sillier from there. However, the Scavenger and Recycler units originated at this time, as did the concept of salvaging destroyed units for resources.

"Lost Brigade" played things fairly straight, with a science fiction World War 2 theme; the titular Brigade and its Axis counterpart were abducted en masse during a battle, dumped on an alien planet, and then faced off against each other while trying to get back to Earth. Unfortunately, Swastikas and Iron Crosses were banned in Germany, so we switched over to the popular Cold War theme. Somehow, we hit upon licensing the Battlezone name, and the rest is history; in retrospect, the name probably hurt as much as it helped.

Jonathan: I see. So when Battlezone II rolled around, what were your thoughts?

Ken: I was all for it, which was why I came along when Pandemic split off from Activision. I liked the first game, I liked the team I was on, and we got a sweetheart deal from Activision to spin off into an external studio.

Based on that deal, I predicted that Activision planned to shut down their internal studio, though Andrew Goldman disagreed. I definitely glad I had spun off when my prediction came true. On the plus side, we did pick up some good people from Activision as a result, Julio Jerez in particular.

Jonathan: But what brought around the idea of a sequel to Battlezone? Did someone in Activision like it and think a sequel was a possibility?

Ken: While not a huge seller, the first Battlezone was well-received by critics and (later) regarded as one of the "best games no one played". The sequel was originally intended as an attempt to convert some of that regard into sales by making it more approachable. Obviously, it diverged from that concept over time, becoming even more hardcore than the original, but that was the thought.

Jonathan: I've noticed in the ODF files while modding that a lot of old functions were left in from the original Battlezone. How much of the old code did you bring over in to the game?

Ken: All of it. We took the BZ1 1.31 code base with us when we split off in June 1998. The first thing I did after that was perform an engine transplant onto the Dark Reign 2 libraries. Conceptual work began well before that, but actual development started there. We finished in December 1999, a little over a year and a half later, and that was after pushing back the ship date by several months.

Jonathan: It took that little time to program? How many people were working on it?

Ken: I think it was 5 programmers, 4 artists, and 3 designers. That was small for a development team even then, but leveraging Dark Reign 2's engine helped immensely.

Jonathan: What did you do get to program? Multiplayer Code, Single player, etc?

Ken: I ended up being what I called the "acting lead programmer" as no one else filled that role, and I was a generalist that knew how everything generally worked. I didn't do any managing, though, as the programming team consisted of only me, Julio Jerez, Nathan Mates, Brad Pickering, and George Sutty, with John Lemberger from Intel helping with SSE code. Team roles were somewhat blurred, as we didn't have particularly strict notions of code ownership.. Hilarity sometimes ensued... :)

While I did a lot of little things everywhere, I was mostly responsible for game play code. I created the hover physics; most of the building types; weapon, ordnance, and explosion classes; the effects system; a lot of the in-game interfaces (reticule, command, radar, status); the input binding interface; and most of the in-game editor. That makes it sound like I wrote most of the game all by myself, but that's not true at all; I just happened to be responsible for some of the more visible parts.

Jonathan: Many things did change in the game play. I was fortunate to find a copy of the original Battlezone on the Internet and the first thing I noticed was that there weren't any bio-metal pools to deploy my scavengers on. When did Bio-metal pools get introduced?

Ken: That was Will Stahl's idea, I think, as he was the lead designer. We always had a problem with Scavengers getting stuck or doing dumb things, so we decided to put in some sort of "scrap mine" you could harvest continuously without depending on a mobile unit. Extractors also served as exposed targets, encouraging battles away

from the main base.

Jonathan: Oh, yes. Yesterday I was playing an un-patched version of Battlezone II and the physics were completely different. Why did Pandemic patch them and change it?

Ken: Battlezone players did *not* like the Battlezone 2 physics! The handling characteristics of vehicles drifted away from their BZ1 equivalents over time, as designers tested them against each other and not the first game. Die-hard Battlezone players expected a continuation of their favorite game, and reacted *very* negatively when everything changed. We received extensive complaints about that on the message board, so we corrected the physics parameters to made things act more like people expected.

Jonathan: Who came up with the idea of in-game screens - like the satellite view and vehicle upgrade panel? IMHO, that greatly added to the game's immersiveness.

Ken: I think that may have been Wil Stahl, the lead designer. The idea was to place the interface for specific buildings inside the buildings themselves, as the main interface was already fairly "busy". It was added relatively late in development, so we couldn't add it to as many places as we would have liked.

Along those lines, I think we should have made interfacing with a building more like piloting a vehicle, providing a secure environment for the player character instead of leaving them exposed. That would have make RTS players a lot more comfortable, as they could play the game more like a "traditional" RTS. It might also have provided a use for buildings that otherwise served only as prerequisites for other things (like the Tech Center).

Jonathan: Ever since the game came out it has had a fan base. Even today 7 years later. Did you ever think that it would catch on like that?

Ken: I didn't really think about that kind of thing too much, as it was only the second game I had ever worked on. Battlezone 1 was a sleeper hit, critically acclaimed but not very strong-selling. Battlezone 2 was that extra bit more "hardcore", even though we had originally intended to simplify it. It was also a bit unpolished in places, and didn't have the novelty factor any more. Still, it's nice having a dedicated (if small) fan base.

Jonathan: You and Nathan Mates began working on the 1.3 patch a couple of years ago. What started that?

Ken: Nathan figured out that there was a particular string of characters you could type into the chat window to crash everyone in the game, so when he told me about it, I figured out what caused the problem fairly quickly. That was the beginning of the 1.3 patch, and the very first entry in the change log (now censored to prevent exploits). While we were at it, we delved into a number of other serious problems that needed fixing, and it spiraled out of control from there. It became a classic case of runaway software development, eventually getting to the point where I was causing more problems than I was fixing. We (for sufficiently "Nathan" values of "we") eventually reigned in most of the excesses to appease the hard-core 1.2 players, which is where we are today.

I ended up taking a year (or two?) hiatus after getting tired of it, but Nathan kept plugging away. I came back for a little while recently, but didn't get all that much accomplished. The project is starting to wind down, as Nathan got married in August and no longer has much time to work on it.

Jonathan: So, what's your favorite thing about this game?

Ken: As a game: its unique nature. Action-RTS games are fairly rare, especially vehicle-based ones. As a project: the impact of my contribution. In BZ2, I could strongly influence (or outright create) so many visible elements. In later games with larger teams, my contribution was relatively smaller.

Jonathan: My Friend Wug created a list of things he wanted to ask. His question is what you think of the state of PC games.

Ken: I'm not necessarily the best judge of that, as I came somewhat late to the
PC game party; I started with an Atari 800 computer in 1983, switched over
to an Amiga 500 in the late 1980s, an Amiga 3000 in 1991, and only got a PC
at home five years ago (1.4GHz Athlon, GeForce 3, 768MB of RAM), followed by a desktop-replacement laptop (2.8GHz Pentium 4, Radeon Mobility 9000, 1GB of RAM). I do play PC games, though mostly by default because the only console I have is a Dreamcast I bought off of someone at work. I primarily do "retrogaming" via emulation, MAME for arcade games, WinUAE for Amiga games, with occasional Vectrex and Atari.

Based on both observation and experience, PC games have become remarkably advanced graphically, with some great advances in AI and physics as well. However, they have also fallen into the "realism trap", sometimes acting more like simulations than games. Gameplay, seems to be stuck in the same few niches: shooter, action, sports, and strategy primarily, with occasional sim, RPG, or adventure game. Just check Metacritic's PC games page (http://www.metacritic.com/games/pc/) to see what I mean. As development
cost has escalated, and the industry matured, games have become more "safe". Every now and then, you'll get something truly innovative, though novel take on a traditional genre are more common and welcome enough.

The main problem with my judgement is that it's mostly based on second-hand knowledge; I haven't gotten a chance to play many of the pinnacles of PC game development.

Jonathan: Do you think Vista will hurt or help PC games?

Ken: It will help in the long run, as Microsoft started placing more emphasis on games now that it's an active player with the Xbox and Xbox 360. Vista elevates Games to the same level as Documents, Pictures, and Music in the
Start menu, a huge change over the general Program Files dumping ground. The new Vista driver model should enhance stability (drivers run in user mode, not kernel mode) and eventually performance (by reducing overhead).
Microsoft plans to offer a performance testing and rating system that should simplify game system requirements.

Beyond that, Windows Live will likely offer many of the advantages of Xbox live and possibly even Valve's Steam
(of which I'm a big fan)

Few games will take advantage of Vista and DirectX 10 at first, as graphics hardware (ATI R600 and NVIDIA G80 series) won't be out until next year, and will likely be very expensive. Many people will take a "wait and see"
attitude for a while, just as they did with Windows XP, so games attempting to capitalize on Vista-only or DX10-only features will have a very small user base.

Eventually, however, things will work out, and I think Vista will be nothing but good for PC gaming.

Jonathan: Does Ken think the generation raised on Playstations and Xboxes are more or less sophosticated gamers?

Ken: They're not "less sophisticated", just "different". Though console gamers and PC gamers overlap somewhat, they are fairly distinct gamer populations for the most part. Part of it comes from the differences in the hardware: consoles cost a few hundred dollars, connect to a television, and use a dedicated game controller; PCs cost a couple thousand dollars, connect to a high-resolution monitor, and use a mouse and keyboard primarily. By their very nature, consoles and their games are more "mass market" and skew
towards somewhat younger gamers. PC and their games tend to be more "niche" and skew toward somewhat older gamers. Beyond that, the two have very different "cultures". Consoles had to rely on pure gameplay because of their weaker hardware and more limited input, while PCs could focus more on simulation because of their stronger hardware and complex input. Unfortunately, too many PC game developers seem to forget that games are supposed to be fun...

Jonathan: Could a hybrid game like Battlezone I/II ever appeal to wider gaming audience?

Ken: BZ2 was meant to do that at first, but headed in the opposite direction. The problem is that mixed-genre games only attract players that like BOTH genres (the intersection) as opposed to EITHER genre (the union). It mainly comes down to learning curve. Action/shooter gamers can pick up just about any action/shooter game on the market and play it in short order, as almost all of them use the same control scheme and feature similar gameplay conventions. Similarly, strategy gamers can pick up just about any strategy game on the market and play it, although strategy games tend to differ from each other more than action games. Confronting an action/shooter gamer with strategy or a strategy player with with action tends to force them outside their genre "comfort zone" and requires a steeper learning curve. My pithiest, if somewhat unfair, summation is this: "FPS players don't want to think; RTS players don't want to die."

Jonathan: Or would the hybrid be required to be too watered down?

I think three things would make such a genre hybrid palatable: a good interface, flexible gameplay, and controlled workload.

A good interface makes performing tasks easy, and gets out of the way. BZ1 and BZ2 tried to build a real-time strategy game from a vehicle-action
foundation, and provided only a minimal set of tools necessary to control the strategic elements. Base and unit management, the two most important tasks in the game, required lots of keypresses to get anything done. The first-person perspective didn't help, either, but the more natural overhead perspective required a special building and made the player vulnerable to attack.

Flexible gameplay should allow players to do what they WANT to do instead of forcing them to do what they DON'T WANT to do; games are meant to be fun,
not work! BZ1 and BZ2 required players to participate in both vehicle-action and strategy in order to succeed, often simultaneously, and did not offer AI control for parts of the game they didn't want to play.
Strategy players had to actively participate in combat to assist their often-ineffectual units. Action-shooter players had to perform base-management duties because no one else could. This frequently put each type of player well outside their comfort zone.

A controlled workload should prevent the game from becoming overwhelming. BZ1 and BZ2 clearly failed in this area, forcing players to do keep track of too many things at once. The formidable workload made the games very intimidating, limiting their audience to a few hardcore players. Self-reliant units and buildings would go a long way towards fixing that, as would AI support in the tactical and strategic parts of the game.

I think these three things together would make a Battle zone-type game more tractable to a general audience.

Jonathan: I agree with you. It's a rare type of game that, even for me, I haven't gotten tired of it after a year of playing it. Some people even on the few forums left still enjoy the game! Thanks for your time in doing this interview, Ken. I really appreciate it.

Ken: Glad I could help. ♠

AIP Scripting Part I
By "Wug"

[EDITOR: This tutorial is good for any version of Battle-zone II, but the fixed AIP system is only available in 1.3pb3.]

      If you were like me, and was completely lost how to do make or modify AIP files, this is for you!

AIPs control the basic functions of how the AI behaves - attack, defend and build. Until recently, there have been serious bugs that limited the AIPs' effect ness. Thanks to GSH [*Nathan Mates*], pretty much all the known bugs have been fixed. Now, AIP scripting can help reduce the need for custom DLLs, or at least eliminate the need for DLLs to work around AIP problems.

Tools

To make AIP files, I recommend using the AIP Editor http://www.leinensoft.com/bz2/aipeditor.htm), which helps simplify and streamline the scripting process. A text editor, like Notepad, is also needed, but for now, we'll do most of the stuff in the AIP Editor.

You will also probably need Pak Explorer (http://www.leinensoft.com/bz2/pakexplorer.htm) to extract AIP files from patch13.pak. It's always handy to have existing AIP files to use as a reference.

AIP files

In IA/MPI, there are 4 AIP sets - one for each AI and player race combo - designated "f" for Scion and "i" for ISDF. Each set has 6 files - ending in "0", "1", "3", "a", "l" and "s".

The file name format is:

<name of AIP set><AI race><player race><plan type>.aip

so the Stock 1.3 AIPs for ISDF AI vs. ISDF are: stock13ii0.aip, stock13ii1.aip, stock13ii3.aip, stock13iia.aip, stock13iil.aip, stock13iis.aip

the "0" file is used at the start of the game. It is used mostly to build and deploy scavengers. The AI switches to the next AIP file once the player has put down the recycler or 3 minutes have elapsed, which-ever comes first.
"1" and "3" files are called next, with a 50/50 of being either one or the other. These two files are generally used to build the base, and execute early-game strat-egy.

The AI switches to "a" when the player has around 5 to 8 assault units. Assault units on the ISDF side are the rocket tank, assault tank, walker and bomber, and mauler and titan on the Scion side.

"S" is used when the AI base is under siege, where the player has an attacking unit within 200 meters of the AI's recycler for at least 45 seconds (this is from mem-ory - don't quote me on this.)

The late game AIP, "l", is used after the conditions for the assault and siege plans are no longer in effect. However, if the AI switched from either "1" or "3" to "s", it will only switch to "a", not "l", and only when the conditions for "a" are met.

My first AIP

There's nothing like hands-on experience, so let's dive right in and make a "hello world" AIP file. The first file to create is the "0" AIP file. Let's make one for ISDF AI vs. ISDF; making the other three AIP sets (Scion AI vs. ISDF, Scion AI vs. Scion and ISDF AI vs. Scion) are pretty much a copy/paste and find/replace exercise.

Start by opening the AIP Editor. The left-hand pane lists the matching units, which we'll ignore for now. The right-hand pane is the "meat and potatoes", where you will spend most of the your time.

Since the "0" AIP file runs for only a short while, per-haps only a few seconds, it should not do too much - no base building, building attack units, etc. Pretty much build scavengers and maybe defenses.

Start by right-clicking in the right-hand pane and click "New". The "Plan Settings" box will appear. Under "Plan Type", select "CollectPool"; give it a "Plan Priority" of, say, 10, and select "build units if neces-sary". Click "OK" to finish the plan. This plan will create a scavenger to go find an open scrap pool to take.

If "build units if necessary" (aka "buildIfNoIdle") was *not* selected, the AI will wait for a scavenger to be-come available, rather than build a new one. Since we have none at the start, this would be a bad idea. Don't worry about the other options at this point - they're pretty much not used for "CollectPool" plans anyway.

Filling out the AIP file

Well, that was easy, but we need more "stuff", so let's finish up the AIP file. Taking one scrap pool won't be enough, so we need to build more scavengers. Highlight the "CollectPool" plan and do copy/paste (via edit menu or standard Windows hotkeys), say, 3 more times. Now we have 4 "CollectPool" plans. On the top menu, click "Plan" and select "Auto-arrange Priorities", which will put the plans into a nice, orderly fashion. Now you should have plans numbered to 10 to 40.

Probably the AI won't get the chance to build even 4 scavengers before switching to either the "1" or "3" AIP file. But just in case, we can put in either more "Col-lectPool" plans, or build a few defensive units, like Scouts or Turrets. Or build some units, and then build more scavengers. There are lots of choices. Save the file. Give it a name, and add "ii0" to the end of it.

Completing the AIP file

Time to add the "extra stuff" and finish off the "0" AIP file. To save time, here are the defaults used by the Stock 1.3 AIPs, which I recommend to use. In a text editor, copy this to the start of the file (remember to leave a blank line after the [IdleDispatcher] section. This can also be done from the AIP Editor, but it's faster this way. I don't recommend tampering with these values until later when you are in the fine-tuning phase.

```
[Start]
scrapCount = 40
consClass = "ivcons"
scavClass = "ivscav"

[IdleDispatcher]
ScavIdleSeconds = 25
UnitIdleSeconds = 120
MinAttackForce = 3
---
```

Now it's ready to test!

Turning on AIP logging

Before you test your AIPs, make sure you turn on AIP logging in two places. Add the /aiplogging parameter to your BZ2 game shortcut to enable in-game AIP logging. The more detailed option is to turn on the option for aip logging in the game-prefs.ini file in the Addon\Config folder. The files are written to the Logs folder, and you will probably need them to figure out what really happened.

Testing the AIP file

Maybe it's a bit premature, but let's see this puppy in action. Remember Pak Explorer that I mentioned in the Tools section? Well, we need it now. Extract the aipdesc.txt and aiplist.txt files from patch13.pak, and put them into the "Addon" folder. Add the name of your AIP set to the aiplist.txt, and give it a description in the aipdesc.txt.

Once that's done, you can start up a game in IA or MPI, and choose your AIP set on the options page in IA and third server options page in MPI. Since you only have the "0" AIP file, you will have up to 3 minutes to see what the AI is doing, as long as don't deploy your recycler. The game won't crash afterwards, but it won't do anything either.

AIP structuring

All right, enough horsing around. Now it's time to get to the good stuff. I suggest writing the "1" AIP file, but it doesn't really matter which file is done next. The "1" file will serve as the template for the remaining AIP files.

Other than the "0" file, I suggest that each of the AIP files be complete. At a minimum, each AIP file should be able to (re-) build the base from scratch, set up defenses and attack the player's base. This is because there is no guarantee which AIP file will be executing, say, when the player bombs the AI Factory.

The overall structure of the AIP file should be low scrap cost plans are put at the top, and build more expensive units and structures further down. This will prevent pre-requisite problems and unnecessary logic loops.

Early defenses

Head back into the AIP Editor. We'll need those scavengers, so save a copy of the "0" file as the "1" file.

The first thing to add after the "CollectPool" plans is a "BuildMinimums" for scouts, a "Hold" plan for turrets, or both. This is to help protect the AI recycler early in the game.

Create a new plan. Put "BuildMinimums" for Plan Type. Under Parameters, select "buildType", then click the down-down list for Value, and choose the ISDF Units -> Vehicles -> Scout. Click Add. Then change "buildType" to "buildCount", then change the value to the number "3", and click Add.

Now, the Plan Data box on the left should have: buildType - ivscout and buildCount - 3. This creates 3 Scouts from the Recycler. Also add a Plan Condition - choose "Team Computer has NOT" and choose ISDF Units -> Buildings -> Factory. This tells the AI to stop producing Scout once the Factory is available to produce more powerful units.

Click OK. The Scouts will hang around until hey are assigned to attack or when the idle dispatcher sends them out. We'll discuss the idle dispatcher in detail later.

The "hold" plan is done pretty much the same way, with "holdType" being the ISDF Turret (ivturr). Usually, one turret is put at each defense point, but if you want more, add more "holdType" parameters. Setting the "holdCount" prevents the AI from endlessly sending Turrets each time one is destroyed. I recommend setting it to "1", since you will need to switch to Gun Towers soon enough. Select "holdPoint", and use the down-down list to choose Path Points -> Defense -> Hold 1. If you want to put a turret at the other defense points, create a "hold" plan for each Hold 1 through 4.

Once you added new plans, click Plan -> Auto-arrange Priorities. This will re-number your plans into an orderly sequence. Remember to this after adding new plans.

Base build-up

After initial defenses are set, it's time to build the base. The buildings can be built in slightly different orders, but you must make sure the pre-requisite buildings are in place. The standard order is: Factory -> Relay Bunker -> Armory -> Service Bay -> Training Facility ->Technical Center -> Bombay Bay

Let's analyze the order. Factory should be the first to be built (or re-built), as it is so important. Usually, Relay Bunker comes next, as the Sabre, Rocket Tank and Assault Tank all require it. However, if you want to do a Mortar Bike rush, build the Armory second, as

it is required. In either case, the Factory, Relay Bunker and Armory are
usually the first three buildings, which allow most of the vehicles to be built, and Gun Towers and Rocket Tanks for defense.

Service bay usually comes next, so the Assault Tank and Service trucks can be built. After Service Bay, the last three structures cost over 60 scrap, so the AI must have at least two scrap pools before they can be built (and three, in the case of the Bomber Bay). The fastest way to build the Bomber Bay would be to skip the Service Bay and Technical Center, and build the Training Facility first. But there is no
guarantee that the AI will control enough scrap pools to do this.

Gun Towers can be added anytime after the Relay Bunker is up. Putting up Gun Towers early in the game makes for a much stronger defense, but if the AI spends too much time and scrap on Gun Towers, the player might get a chance to build the Bombay Bay, and send the bomber to destroy the base. The ISDF also needs a Power Generator for every 3 buildings built, excluding the Power Generator itself. The Scion side is a bit
simpler, and we'll discuss it later.

Before you can build base structures, create a "Build-Minimum" plan to build two Constructors. The AI tends to have stalling problems with Constructors, so a second one is necessary to keep the base going.

Now, add a new "BuildBaseMinimum" plan. Choose Parameter of "buildType", Value of "Power Generator" and click Add. Then add the "buildCount" with a Value of 1. Repeat the procedure to add the Factory, Relay Bunker and Armory. The Plan Data box on the left should now have a list of "buildType" and "build-Count" 1 through 4. Click OK.
Don't forget to do Auto-arrange Priorities.

First attack wave

It's probably not a good idea to leave the player unmolested for too long. Now that you can build units from the Factory, it's probably a good time to send the Scouts out to pay the player a visit.

You can either add an "Attacker" plan, or let the idle dispatcher send the units out. On default settings, the idle dispatcher waits for three units that have been idle for at least 2 minutes before sending them out. This may be a bit too quick, especially if you want to use the "Attacker" plan to control what the Scouts attack, rather than have them
attack randomly.

Let's not worry about idle dispatcher settings for now. So go ahead and add the "Attacker" plan. First, decide what the AI should attack and assign it to "targetType". You have a few choices - the player's constructor, power generators or extractors are probably a safe bet, but you can choose whatever you want. Remember, it's early in the game, so the big units and buildings are probably not available as targets.

You have to assign each Scout to "attackType", so there should be three "attackType" parameters after "targetType". There are a few optional parameters,

which you may wish to set - "maxAttacks", "attackAnything" and "buildIfNoIdle". The "maxAttacks" parameter is set to 3 by default. Since you probably don't want to waste any more scrap building Scouts, setting it to 1 is probably a good idea.

The "attackAnything" parameter defaults to false, which means the Scouts would only attack if the "targetType" is available. I generally set it to true, so the Scouts will randomly attack another target and not sit around doing nothing. The "build units if necessary" parameter defaults to 0; set it to 1 so it will build enough Scouts to attack. This may be necessary because even though you have already built three Scouts, there
is no guarantee they are not busy fighting or have been destroyed.

Build more units!

Now that the player is a bit more pre-occupied, it's time to build more units to defend the base. From the Factory, you can now build the Missile Scout, Mortar Bike, Tank (Sabre) and Rocket Tank. Although Rocket Tanks can be build, they require 65 scrap, so the AI must control a second scrap pool to build them. It's a safer bet to build Sabres (at 55 scrap), since it's still early in the game.

Create a "BuildMinimum" plan like the one used to build the Scouts earlier. Three units are considered the "sweet spot", but build more or less as you like. You probably want to put in a Plan Condition to check for the Service Bay (like above with the Factory), and add the parameter "maxTtlScrap" with the value of 80. This will stop the plan from building Sabres when Assault Tanks (Bulldogs) can be built. Assume 2 scrap pools and keep building
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>From this point forward, all the plans assume the AI controls two scrap pools (i.e. 80 scrap capacity). It's time to create a new "BuildBaseMinimum" plan to build most of the remaining structures. Technically, Gun Towers could have been built before producing units from the Factory, but it may be risky to leave Constructors unprotected.

The building order I recommend is:
- Power Generator #2
- Gun Tower
- Service Bay
- Training Facility
- Power Generator #3
- Gun Tower #2

For Power Generator #2, put a "buildCount" of 2, and Power Generator #3, put a "buildCount" of 3. The "buildCount" parameter states the total number of a particular unit or structure that the AI should have in the game, and not how many to build at one time. So to build the second Gun Tower, use a "buildCount" of 2.

Attack wave #2 and beyond

Once the second Gun Tower is up, the base is good shape. Time to send out those Sabres to wreak some havoc. I'd probably go after the player's extractors, but again, choose whatever target you like. So create a new Attacker plan like you did for the

Scouts.

Then start building your assault units - Assault Tanks (Bulldogs) and Rocket Tanks. The two units are very complimentary to each other, and are tougher to bring down as a team. A good mix would be two Bulldogs and one Rocket Tank. So create a new "BuildMinimum" plan with "buildType" of Assault Tank and "buildCount" of 2, and "buildType" of Rocket Tank and "buildCount" of 1.

I recommend putting an "Attacker" plan to attack the player's extractors with the three new units right away. You want to make sure the AI has a third extractor, so it has the necessary 100-scrap capacity. Unlike previous "Attacker" plans, I recommend setting "maxAttacks" to a higher value - probably 999, so that it effectively attacks indefinitely.

Assume 3 scrap pools

Now it's time to build the Tech Center and Bomber Bay. Although the Tech Center requires 80 scrap, it is required to build the Walker (Attila), which requires 100 scrap, so there's no point in building it early.

So the build is now:
- Bombay Bay
- Tech Center
- Power Generator #4

I recommend building the Bomber Bay before the Tech Center because of placement problems. If you build too many buildings before the Bombay Bay, there may not be enough room to build the Bombay Bay, especially on a small map. The fourth Power Generator is built to provide spare power in case a Power Generator is knocked out. Don't want the Gun Towers to stop working, now do we? ;)

Also, make sure to put a "BuildMinimum" plan for the Bomber right after the "BuildBaseMinimum", so the Bomber can be rebuilt after it is destroyed.

Attack with everything!

Now the base is complete, so build more units and attack! Since the Attila, Bulldog and Rocket Tank are roughly the same speed, they can be sent out as a group. While the Attila is powerful, its limited ammo and firing arc, makes it quite vulnerable. And with its high cost, it's probably best not to try to build too many.

Since you already have a previous "BuildMinimum" plan with 2 Bulldogs and a Rocket Tank (and it's still in effect), the new "BuildMinimum" plan has to include them in the "buildCount". So if we are to build 3 more units - 1 Attila, 1 Bulldog and 1 Rocket Tank, the "buildCount" would be 1 for Attila, 3 for Bulldogs and 2 for Rocket Tanks. Then add
the "Attacker" plan to use the three new units.

You can continue to add more "BuildMinimum" and "Attacker" plans, but be aware that it will take a long time before the AI will be able to even build and sustain 6 attacking units. You might also consider throwing in a convoy of APCs to attack deep into the player's base, just to keep him off balance.

For now, I recommend letting the idle dispatcher use the Bomber to attack, instead of using an "Attacker" plan. Bomber attack plans tend to be too predictable and overly aggressive, which makes it ineffective and too costly (in terms of scrap) once the player catches on. The idle dispatcher randomly selects a nearby structure to attack, so it is quite effective and hard to defend against.

Copy and paste

Well, let's wrap things up. You should now have a basic, but functional AIP file. You can certainly add more gun towers and rocket tanks to strengthen the AI base defense. Or you could even forgo the gun towers and build units to attack sooner. How you tweak the AI's strategy is up to you.

You can now copy this file to create the "3", "a", "l" and "s" files for the ISDF AI vs. ISDF. It's basically the same procedure to create the remaining 3 AIP file groups, just changing the ISDF specific items to Scion as necessary.

Next issue, we'll analyze the Scion side of things, and discuss how to tweak the different AIP files for their specific roles.♠

Wug is the creator of the new AIP sets that are found in the new 1.3pb3 patch. He introduced Easy to Insane AIPs to keep players on their toes. His new AIPs are available for both Instant Action and Multiplayer player MPI matches.

Dune Command
By Fishbone
Fishbone's anticipated Dune Command is presently on hold waiting for the finalizing of the 1.3.

http://www.bz2md.com/smf/index.php?board=12.0

Hidden Enemies
By JonathanS
HE is in it's 2nd phase with creating models for the new alien called theShree. Many of the Config, multi-player, and miscilanious parts have been completed.

http://www.bz2md.com/smf/index.php?board=47.0

FleshStorm
By Lizard
FleshStorm 1.1 was released in Early April. The mod has 8 missions and a completely new race. It can be downloaded at:

http://www.lizard.clara.co.uk/FsWebsite/FleshStorm_Download.htm

BZRAP
By ?
This is a collection of race put together to be used in one mod. No new news can be found as of yet.

http://www.bz2md.com/smf/index.php?board=19.0

Battlezone: Classic
By Avatar
Battlezone Classic has most of its missions completed. Avatar has been busy in Real Life so he has been unable to complete it. The release date is: Soon.

http://www.bz2md.com/smf/index.php?board=43.0

X-MOD
By –X-
The X-mod is in the beta testing stage with X-mod V3.1 Beta 1 released. –X- is still looking for more Beta testers.

http://www.bz2md.com/smf/index.php?board=45.0

EPIC
By Sloar
Epic is on pause till the finalization of the 1.3 patch. Epic is a Semi-Sequal to Forgotten Enemies.

http://www.bz2md.com/smf/index.php?board=3.0

Tiberian Battles
By Huscar
Last known information was that Huscar requested different creatures that anybody could have *"…100-200 polygon limit that you'd like to share, then do so!"*

http://www.bz2md.com/smf/index.php?board=?38.0

Rise of the Jenova
By Raven
The RavenMod is in it's beta testing phase with Beta 2.0. Mostly Multiplayer is being tested by the Raven Testing Team. Many new units have been added to both the ISDF and Scion.

http://www.ravemod.com/

Special Ops
By NoK0mm3nt
2 Tech Packs have been released, but no news since Autumn of '03.

http://www.bz2md.com/smf/index.php?board=25.0

NOMAD MOD
By GreenHeart
The nomad mod has been paused for the time being because of the development of the 1.3 community Project.

http://www.bz2md.com/smf/index.php?board=31.0

RACES
By Juvat
Races is a mod that allows the pitting of multiple races from different mods against each other. Hadean VS Uler, Ceberi VS NSDF, etc.
So far only the Hadean, Uler, Ceberi, and Shadows have been added.
http://www.bz2md.com/smf/index.php?board=39.0

Outpost Mod
By ctaragon
This mod has a lot of preliminary work done including MM5 launcher, batch files, and some of the config files.

http://www.bz2md.com/smf/index.php?board=40.0

BZUA
By Skynet
Last known report was that they were still attempting to recover data from their hardrive. They are also looking for backup CDs. Last post was in Summer of '05.

http://www.bz2md.com/smf/index.php?board=37.0

FLS
By Zero Angel
Nothing new, the mod began development, but has gone silent for now. Last post was in Summer of '04.

http://www.bz2md.com/smf/index.php?board=35.0

Eve of Darkness
By AngelWing
A complete conversion of the Battlezone II engine with no bz2 connections. Eve of Darkness was going on it's beta stage and a demo was planned.

http://ww.bz2md.com/smf/index.php?board=50.0

Doom's Day
By SeanTheGreat
The Doom's Day mod has renamed itself WarFront. It's last known Beta was V2.1. Last thing was that he had used some models created by Spritplumber (with permission) and that he was looking for modelers)

http://www.bz2md.com/smf/index.php?board=55.0

PROJECT: SIC
By DrummaDude
In it's early tages with a list of units that will be created. Including units like Goliath, Harbinger and more.

http://www.bzuniverse.com/forum/index.php/topic,5975.0/topicseen.html

Dark Empire
By DerVampyrEngel
The Dark Empire mod is moving slowly. The last post by the owners was an announcement that he has more units completed and a website shuld be up soon. The post was in January of '06.

http://www.bz2md.com/smf/index.php?board=16.0

Zephyr
By spAce
Zephyr has been released to the public since the 23rd of September.

Http://www.bz2md.com/smf/index.php?board=26.0

WAS YOUR MOD MISSED?

If so, then you can have it inserted by sending a request to Morg223@jtworld.net. What you need to send is the name of your mod, your name and/or ID and a small blurb on what has happened recently with your mod.

Do you want to update the information in your section of this magazine about your Mod? Then email Jonathan at the same location with the new news. :)

Schrodinger's Rat

By "OC HawkEye"

Death: the bitter metallic tang of freshly spilled blood; the cloying, craw-wrenching reek of putrifying flesh. And that was just inside my tank. It hung like a shadowy, mind-numbing fog, choking thought, quailing spirit, squelching all desire save one: to run. Whether the smell was real or just a memory of ancient battles gone bad, I couldn't tell. It set my teeth on edge, knotted my throat and made me want to puke just the same.

    Burning time weeks on end, forever patrolling the same barren ground on an apparently dead, barren planet was never much fun for any grunt. It did have one appeal: nobody trying to kill you. Days blurred together cruising sandy basins and rocky canyons, chewing leftover C-rats, sucking bottled air, looking forward to a cold shower at the end of the patrol, the dismal highlight of a barren, dreary week.

I was actually beginning to feel rested, almost looking forward to something better than a do-nothing assignment. I realize now that I was just beginning to lose the edge. In the dim light of what passes for twilight on this god-forsaken rock, I missed a turn and stumbled into a canyon I'd not seen before. I stumbled onto Death. Burned-out hulls resting in puddles of fused bio-metal choked the canyon. Blackened bodies littered the blasted ground around them. It looked like a whole company had met it's foul fate here, maybe more. I didn't recognize the insignia and there seemed to be more than one. In the thin atmosphere the bodies were bloated almost beyond recognition, their torn body armor the only thing giving them any definition at all. I knew the almost non-existent air couldn't carry the smell into my tank, but it was in my nose and on my tongue nonetheless.

It was impossible to tell how fresh the corpses might be, but they couldn't have been there long. How many times had I passed, just beyond the ridge, as they lay there? Had I passed as they were dying, in flames, filled with rage and terror, screaming their last orders, their last curses, their last prayers? And I'd seen nothing, heard nothing. I couldn't even imagine where this unidentifiable company could have come from, let alone fought their last stand here, just over the ridge from my patrol route.

    I saw the puddles of scrap again and an unpleasant thought drifted up through the red fog in my mind. I scanned the canyon again, quickly, furtively, the beat in my chest picking up the pace just a bit. No enemy tanks or bodies in sight. Nothing. But the scrap was still there. They would certainly be returning for it. They could be watching now, a sniper's crosshairs trained on my left nostril. The thought made me want to crap my shorts, if only I hadn't crapped them already.
....

"You are dead, Greenie." Jackal leered at the scowling recruit through sharp teeth as if he were eyeing a particularly tasty looking morsel. The recruit ignored him, focusing his attention on the sergeant, tensed like a drawn bowstring, fists and jaw clenched, ready to pound his commander into the ground, consequences be damned.

The sergeant towered over the recruit, his own fists resting lightly on his hips. He gazed down on the recruit with an apparent air of nonchalance. He looked bored. Jackal knew better. He was eager to see the obnoxious jerk pounded into a bloody, muddy pulp.

"You're no better than any of the dozens of other recruits that've come through here," continued Jackal.

"They all had the same chip on their shoulder. They all thought they knew how to fight and run the show better than anyone else. They were all stupid. Now they're all dead."

the sergeant didn't take his eyes off the recruit.

"Stow it with your gear, Jackal."

Jackal's leer drooped a little but he was still leering when he moved off. The sergeant patiently studied the recruit, waiting for the moment when Jackal passed out of sight, waiting for the instant when the recruit would relax, if only ever so slightly.

"You haven't seen the enemy, Private," he said when the moment came. "You haven't done anything but play soldier and fill your muddy brain with useless clutter."

The recruit's glowering squint tightened slightly, a twitch flickered in the corner of his mouth. The sergeant leaned closer and the recruit had to turn his eyes up to stare at the bigger man through his eyebrows.

"When you do see the enemy," the sergeant rumbled, "everything you think you have ever known will vanish. Your head will be an empty bubble. Then you will either learn what you really need to know or we will be dragging what's left of your sorry carcass off the battlefield."

    The sergeant held the recruit's obdurate glower for a moment then dismissed him. The recruit said nothing but marched away woodenly, still scowling. The sergeant turned and found his lieutenant standing nearby, very evidently aware of the confrontation just transpired, and very evidently displeased.

"Was that the new recruit, Sergeant?"

"Yes, Sir."

"We may be going into battle tomorrow, Sergeant. You know very well that we cannot afford any bad blood in the ranks. I don't expect you to coddle these boys, but I do expect you to get them into line so they'll follow orders."

"Yes, Sir."

"Neither the ISDF nor the AAN enjoy the wasted expense of training and shipping these boys all the way out here only to have them killed in their first conflict. Killed by stupidity. Every time we lose one, butts getted kicked all the way down the chain of command, as you well know."

"Yes, Sir. I still have the imprint of your boot on my backside from the last one ... Sir." The lieutenant suppressed a smirk.

"They're all fine men, I'm sure, Sir. Unfortunately, most of them come to us with over-inflated egos, looking to prove themselves in a macho grasp for glory. They're a danger to themselves and a liability to the company, until they're made to drop the chip and fall into line."

The lieutenant nodded in agreement. "I hear you, Sergeant. What's the problem with this one?"

"Rebellious. Bull-headed. He needs to be taken down a couple of notches."

"You want me to talk to him?" The sergeant shook his head and almost immediately replied in the negative, thinking to take care of the problem himself, as usual. The recruit would hate him, for a while. That might work to side him with the rest of the grunts, if they'd have him, but he still wouldn't be quick enough to follow orders. The sergeant paused and scanned the lieutenant's lean form. The officer's size was deceptive. The lieutenant was lighter than most of the grunts, but with his agility and quick wits, he could easily go toe to toe with any of them. The sergeant had kissed the floor on many occasions under the persuasive hands, and boot, of the lieutenant. The sergeant suddenly had a much better idea.

"Actually, Lieutenant, " he said with a grin, "I think it's about time our new recruit met his commanding officer." The corners of the lieutenant's mouth slowly curled upward as mutual inspiration dawned. "I concur, Sergeant. I think it might be a very good time to make our acquaintence indeed."

The next morning I was standing at attention in the front rank of my platoon, half my face covered by an enormous purple bruise, one eye swollen almost shut. My lower lip was fat and numb with a nasty little split near one corner. The night before I'd gone to the canteen and picked a fight with a skinny runt that got in my way once too often. My encounter with Jackal and the sergeant had rankled and I was looking to take it out on someone. The runt looked like easy pickings. I got to take one swing at his puny face. In an instant, I was kissing the floor hard, wondering whether I had any teeth left.

I still hadn't figured out just how he'd done it in the chill dawn, when the sergeant saluted an approaching officer. The runt that had given me such a good shellacking swam out of the corner of my bleary, swollen eye and returned the sergeant's salute. At the canteen, he'd been wearing nothing but his fatigues. This morning he was sporting lieutenant's bars. I hadn't touched him at the canteen. He didn't have a mark on him. The lieutenant looked right through me and started the day's briefing as if he'd never seen me before. The sergeant strolled down the line and murmured as he passed me, "Shut your mouth, Private, before something embarrassing falls out."

I didn't quit being an obnoxious jerk right away, and probably still haven't. A lot of blood has passed under the bridge since then. The lieutenant's a captain now and we've had a long succession of junior officers pass between us, some too good to lose, some so bad it seemed we would be stuck with them forever. The last one had proven to be completely useless in battle. The captain couldn't get rid of him fast enough to suit anyone. But get rid of him he did. You don't get a free ride back to Earth once you've been shipped out with the ISDF. I heard he went to Braddock's personal staff. Beyond that, I don't know. The guy was such an idiot, Braddock had to have either hand-fed him to the enemy in bite-sized chunks or become his bosom buddy at first sight, like birds of a feather. The captain and I have been to Hell and back together too often to count, if we cared to, and it was moments like this that made me glad we didn't have a green lieutenant between us. He'd want the initial report straight and he'd want to see the field for himself right away.

The 'phones in my helmet crackled to life, a tone followed by two quick chirps. I keyed my mike, two quick clicks and eased back on the throttle, slowly backing out of the desecrated canyon. It was starting to get dark. The pitted hulls were becoming silouettes, the blackened bodies were disappearing into the shadows altogether. I left a beacon near the entrance to the canyon and rolled out onto the gravelly plain, making a beeline for my wingman's rendevous point.

"You find something interesting to look at tonight, Sarge?" my wingman quipped as my tank hove into view. I rolled to a stop near his idling tank and said, "Let's take it to the barn, Mouse. You have the lead." I knew he wouldn't be satisfied with my reticence, his curiosity would be piqued all the more. He'd get to see more than he really wanted tomorrow, but the captain would hear about it first.

In the thin air of that dead planet, the sun dropped from the sky without preamble like it had been pole-axed. Pitch darkness slapped the eyes like a scorned lover, and the self-same stars leaped up in stinging rebuke. Mouse didn't say anything more. He knew me too well and knew he'd be filled in with all the gory details later. I followed just outside his dusty wake, looking over my shoulder the whole way. It was a long, cold ride back to base.
....

Shortly after dawn, the Captain and I were standing among the charred hulls near the further end of the ravine I'd stumbled on the night before. The recovery team was slowly combing the area for tell-tale debris. Unfortunately, there was not much to collect. The bodies that had littered the canyon floor and even the smallest bits of bio-metal scrap had been removed in the night. Except for the wrecked tanks and my previous night's comm-cam recording, which the Captain and I had reviewed several times before turning in, one might think I had merely had a bad flashback, seeing things that weren't there.

Even the gravelly earth underfoot appeared to have been raked. There were no bootprints or treadmarks. Except for the comm-cam evidence to the contrary, the blackened hulls might have been sitting there for years, decades. The thin atmosphere carried very little oxygen or other reactive gases, so the metal wouldn't corrode, and the ravine was fairly well protected from the effects of blowing sand. These hulls might sit here a thousand years and their appearance not appreciably change.

"Somebody does not want us to know what happened here." I said gazing out over the plain beyond the far opening of the canyon. A slightly darker strip of disturbed earth ran straight out into the rocky plain, a perfect line to the horizon. The earth had been raked to cover tracks, but the raking left it's own mark. "But the their elimination of the evidence was less than perfect."

"Do you think they know you were here last night?" queried the Captain. "I'd bet my life on it," I muttered after a pause to remember that queasy feeling I had, thinking about the sniper's squinting eye peering at me through a high-power scope mounted on a high-power rifle. "Then we have to assume they know we know what they don't want us to know." I half turned to the Captain with a strained expression, "You're gonna start my day with a headache sayin' stuff like that, Captain."

He chuckled. We were both wondering the same thing: why didn't they just kill me when they had the chance? As it was, the comm-cam recording was the only real evidence we had to prove that there had been any bodies, that the freshly molten scrap belied the ambiguous age of the battlefield. We might even be able to identify the unknown company by the insignia clearly visible on the bodies and tanks in the recording, even though the hulls left behind had been stripped of any identifiable markings. But why go to so much trouble and yet leave even a lone human witness? They had to know about the comm-cam as well.

Whoever they were had gone to a great deal of trouble indeed. Bits of flesh and splattered scrap would have been sprayed widely over the entire area and splattered onto the walls of the ravine in the mayhem of the battle. But the recovery team wasn't finding anything. Not the least bit of scrap. Not even the smallest drop of blood. The sanitization had been very thorough. But why?

While the Captain and I were pondering the very peculiar nature of this puzzle, Mouse climbed up the slight incline to where we gazed out over the thin ribbon of raked earth extending out of sight. "Found something, Sarge."

I turned and Mouse dropped a tiny button of shiny metal sealed in a small transparent bag into my open palm. Bio-metal. "Well, well, " I said turning to the Captain, "looks like they left something for us after all."

I dropped the miniscule blob into the Captain's palm. "Where'd you find this, Private?" he asked.

"Wedged in a crack in the wall just over there, Sir." He pointed. "Funny thing, it was right at eye level, and it looked like someone had just jammed it into the crack. It didn't look like it had been sprayed onto the wall by an explosion at all."

"Did the engineers get a look at this before it was removed?"

"Yes, Sir. They didn't pry it out for me until they'd gone over it pretty well. They're still scanning the rock in that area."

We all turned and saw the three engineers scrutinizing

the scored stone. "I didn't see anything else around it though."

"Thank you, Private. Keep looking just the same."

"Yes, Sir." Mouse offered the Captain an abbreviated salute and returned to the knot of engineers.

The Captain opened the bag and bounced the little bit of metal in his gloved hand. He touched a small, recessed plate on his helmet and gazed at the pellet, turning it this way and that in the dim light of the small and distant sun. "Scion." The Captain spat the word out in a subdued hiss.

I'd seen plenty of Scion scrap but hadn't made a close study of it and wondered how the Captain could tell the difference from this tiny bit of bio-metal. "How can you tell?"

"Set your visor to polarized filtration, 90 degrees."

I pressed the toggle plate on my helmet. The shiny, silvery surface of the bio-metal suddenly took on an irridescent hue of blue. Streaks of green coruscated over its smooth surface.

"Viewed through a polarization filter, Scion bio-metal displays an irridescence that is utterly absent in ISDF bio-metal," continued the Captain. "I heard some engineers talking about it once. They think it may be an effect produced by the processing that enables morphallaxis in some of their vehicles."

"Morpha-what?"

"Morphallaxis. The ability to change form."

I grunted in dubious acknowledgement. I was quite familiar with what he was talking about, having seen Scion tanks shifting shape in action, up close and personal. It seemed to be a favorite tactic for the Scions to rush into battle with their tanks configured in a speedy, streamlined form and then alter their shape on the fly to a bulkier configuration that afforded greater battle endurance and firepower. We grunts usually called it "morphing." Thanks to the Captain, now I knew why.

The Captain dropped the bio-metal button back into its bag and sealed it up again and said, "But this doesn't help us one bit."

"No?"

"No. This was obviously planted and we were meant to find it."

He had his hands on his hips, staring out along that line in the dirt. "If the Scions were responsible for this massacre, why would they bother to collect the human bodies. And if they cared enough to scour the canyon for every trace of spilled bio-metal, why would they then plant this one tiny pellet? It makes no sense."

The Captain paused and looked down at the bagged button in his hand again. "Someone must think we are really stupid not to see right through this, Sergeant, and they're jerking us around royally. Unfortunately, we don't have enough information to figure it all out yet. Hopefully, a more detailed analysis of your comm-cam recording will help. Meanwhile, we need more information."

I turned and caught the Mouse's attention, beckoning with a quick gesture. I could almost read the Captain's mind and knew what must be coming next. If I was right it would mean a much needed break from the monotony of regular patrols, a chance for some excitement. A very real opportunity to meet the same fate as the unknown and very dead company.

The Captain snapped out of his reverie and turned to me, "Sergeant, take a squad out into the plain. Find out what's at the other end of this. They've certainly left a clear trail, whoever they are, and it's obvious they mean for us to follow it."

"What about the Major, Sir?"

"I'll have to transmit a report, of course, but I'd like to be able to give him more than what we've got so far. You know he doesn't like inconclusive reports."

"Yes, Sir."

"Be careful, Sergeant. This is a recon mission only. Avoid getting yourself into a firefight if at all possible. There's no telling what you're going to find. Get what we need and get it back ASAP." "Yes, Sir."

The Captain marched off toward the engineers who appeared to have finished their scanning.

"Mouse, " I said, turning to the private, "pick a volunteer and head out. The rest of the squad will follow within two minutes."

"Yes, Sir!" Mouse bounded off like he couldn't wait to hit the trail. Someone who did not know him well would think that he was too eager, too likely to rush imprudently into trouble. But Mouse had the coolest head in the squad. I could count on his discretion as the best point man in the platoon.

The dust from the forward scouts had barely settled when I roared out of the far end of the ravine in my tank with the rest of the squad in tow, a half dozen tanks and another four scouts. The engineers were already packing up and moving out, headed back to base. The Captain and his wing were already homeward bound. Mouse and his partner showed as steady blips out ahead on my radar. The rest of the screen was blank.

About two hours and a hundred and sixty clicks later, Mouse and his wing came to a stop. My phones crackled and Mouse reported that the trail had ended at the edge of a broad table of bare bedrock. When the rest of us pulled up to the forward scouts, Mouse was on foot, about fifty meters ahead, scanning the terrain with his optiscope. I climbed out of my tank and walked out across the naked rock. The rest of the squad spread out to provide cover against any surprises.

Mouse didn't wait for me to come to a stop next to him to begin his report. "I've scanned the entire horizon," he said "and there's nothing out there except that low mountain dead ahead." He handed the optiscope to me and I held it to my visor to scan the mountain he indicated. Nothing more perceptible than the blank face of the mountain was apparent.

"Once on this rock," continued Mouse, they could have gone in any direction and we probably would not be able to track them." I brought the 'scope down and turned attentively to Mouse. He was building up to something he thought important. "It's a good thing we stopped where we did." he said and crouched down near a shallow depression in the stone. The depression was dusted with a thing layer of sand.

I crouched down next to Mouse and peered at the sand he so obviously wanted me to study. A very faint pattern of light and shadow was apparent. Something heavy had passed this way and left an almost imperceptible impression in the thin layer of sand. If the sun were only a little higher, no shadows would have been cast and we would have missed it completely. "This is not Scion," said Mouse, "this is the track of an ISDF scav."

He was right.

"How old would you say?" I asked.

"No more than twelve hours."

Even on that almost airless planet, there was enough wind to have blown that whisper thin layer of sand completely away, leveled it out or covered it over with a deeper layer within a matter of hours. The track was fresh.

"And the line of travel remains true to the trail: straight toward that mountain." Mouse concluded.

We rose and gazed out over the stony plain that rose toward the mountain. "Another thirty clicks and maybe we'll find what we came out here for." I said.

"Get your wing and take it slow. We'll follow about a minute behind."

"Yes, Sir."

Mouse hussled to his scout and, with his partner, cruised off toward the mountain. I mounted my tank, collected the remainder of the squad and followed the pair of blips on my radar. About fifteen minutes later, the radar

scope beguin to flutter and then the blips that were Mouse and his wing suddenly vanished from the screen. I brought the squad to a halt. The radar display was wavering uselessly.

"Foxtrot Able, do you copy." I called to Mouse somewhere out there where I could not now see him. A minute passed and there was no response to repeated calls for an answer. Something was interfering with our communications. Even the transmissions between the nearby squad members were noisy and distorted.

Another minute passed and I was about to order the squad forward when a pair of scouts appeared near the horizon and breezed up to a rolling stop nearby. "It's a jammer, Sir." Mouse proclaimed through the interference. "There's a sheer face at the base of the mountain. I could just see it at the bottom of the cliff."

"A jammer? Are you sure? We're more than five clicks out!" The Scion jammer is a nasty piece of stealth technology that effectively destroys radio signals of all kinds within it's sphere of influence. Something like electromagnetic white noise. At least that's the way an engineer explained it to me once. But I'd never encountered a jammer that had more than a half-click's range. There had to be others around or this thing was huge with a phenomenal power supply. "There's nothing else between here and there, Sarge." The kid could read my mind.

"Did you see anything else, any activity of any kind?" I queried.

"There might be a bunker behind the jammer, but no activity that I could see."

"No vehicles?"

"No, Sir."

Lovely. Stuck out in the middle of nowhere, radio blinded by a monster jammer. There was no telling what might be waiting for us on, under or around the mountain. The jammer had to go. "Kagan, Dumas," I barked, "You're with Mouse."

The two additional scouts moved forward. This little operation would require speed.

"Mouse, you're going to have to get in and plant a pair of charges on the jammer. Get in and get out quick. If you meet any vehicles, high-tail it back here. If you piddle around and take more than ten minutes getting out, we're going to have to come in and find out what happened."

"Yes, Sir." Mouse knew the implications. If we had to go in after him, our communications would be smothered under the jammer's electromagnetic blanket. We could be massacred in there and no one would ever know. Mouse swivelled his craft around and the four scouts roared off toward the mountain.

A month passed in those ten minutes. I grew a beard. Empires rose and fell. I cursed the slow passage of time a dozen times over. It wasn't the first time. Sometime after my run-in with Jackal and my old sergeant, and the subsequent ignominious introduction to the Captain, then lieutenant, we found ourselves squatting in a shallow blast crater on some nameless planet. At least that one had a reasonable atmosphere and a smattering of bushy growths that passed as vegetation. We were serving flank protection duty away from the main action, at least, that is, until the Scions decided to change their battle plan.

We suddenly found ourselves facing the brunt of the alien attack. Scion tanks appeared practically out of nowhere and obliterated half the platoon in a matter of minutes. It didn't help that we took most of them out in return or sent them packing in flames. Another wave of tanks appeared backed up by assault tanks. We went from crushing boredom to sheer terror in the blink of an eye.

As the second wave of tanks approached, the sergeant moved forward, whether to assess the situation or to start a counter-attack I'll never know. As his tank edged over the lip of the crater it suddenly erupted in a shower of smoldering fragments and flame. In an instant, without a word, the sergeant was gone. Nothing left but a rapidly dissipating cloud of super-heated vapor.

For a what seemed an eternity, I sat stunned while all Hell broke lose around me. I had never so hated the sergeant that I might want to see him dead. I had, in fact, begun to bear a grudging respect for the man, expecting and depending on his leadership. Suddenly that leadership was gone.
The men around me were likewise left in total confusion. Some were screaming for help, others were shouting curses, a few were simply screaming in terror. I scanned the crater, looking for someone to tell us how to get out of this mess. There was no one. Not even Jackal. His tank lay in a flaming heap in the far side of the crater. A charred lump sat in the cockpit where Jackal had been.

Inexplicably, that sight woke me up. I didn't become as angry as I became determined. Determined to avenge the deaths of men, worthy or not, that I had begun to depend upon for guidance. The last wave of tanks had been beaten off but we were down to precious few fighting vehicles. Many of our pilots had had to bail and were huddled or milling in the bottom of the crater, completely at a loss. Some weren't even carrying their rifles.

I looked to my right. The Giant, a huge man who could barely squeeze himself into a tank, a dark bearded Sikh, pried himself out of the wreckage of his blasted tank. He had a look of manic determination on his face. On his feet, he reached down and hoisted a chaingun torn from it's mountings. I couldn't imagine what he might do with it. The thing had to weigh two hundred pounds. But his determination fueled my own.

I turned to my left. One of our scouts was in a frantic corkscrew twisting match with a Scion missle tank. Rockets were flying in all directions. I saw another tank sitting idle nearby, "Lefty!" I shouted, "get your tank up there and help Drake with that MT!" The tank leapt to life, filled with purpose as if never so filled before. A shadow passed across my cockpit. I looked up and saw a Scion transport descending near the edge of the crater. I never knew they even had such things. A dozen aliens poured out of the transport, heading our way, guns blazing. The Giant loomed up with the chaingun cradled in his arms. He had hot-wired a manual trigger on the thing and began laying down deadly fire on the approaching aliens, his mouth wide open in a leonine roar that reverberated in my cockpit.

But they were too many for him. I whirled about and cut loose a volley of mortar rounds. Half the aliens went down instantly. The Giant would be able to handle the remainder. I nosed forward. A pair of assault tanks were bearing down, their treads kicking up a cloud of dust through which I could see bulbous shapes rocking atop clusters of mechanical legs. We were fast running out of time, where was the remainder of our company?

"George, Cocklin!" I hollered, "get a bazooka up here quick!" I hit the jump jets and popped off a pair of stabber rounds at the leading assault tank. The turret swiveled my direction and a bolt of high-voltage energy shot over my head as my tank settled back into the crater. George and Cocklin hit the edge of the crater and knelt to fire their weapons. The assault tank turret swiveled back in their direction. I hit the jets again and unloaded my stabber pack on the tank. He ignored me, bearing down hard on the men kneeling at lip of the crater. A pair of smoke trails streaked across the hot sand. An electric blue bolt spat between the tank and the crater. George and Cocklin leaped aside just in time. A puddle of molten glass steamed in the very spot where they had knelt. One of their rockets glanced along the far side of the tank and exploded uselessly behind it, but the other found a weak link in the near tread. The tread parted and peeled away like the skin of a rotten banana. The naked rail dug into the sand, the tank canting hard over, the turret swinging down to a useless angle.

The second tank pulled alongside the first and

paused. The missle tank that Lefty and Drake were dancing with suddenly erupted in a deafening explosion. Torn metal rained down on my tank. The hatch on top of the disabled alien assault tank popped open and the pilot rocketed into the sky. The other tank started backing up, quickly gaining speed. The herd of spidery things veiled in the dust turned and galloped away as a tank from our company at large appeared over my left shoulder. A service truck trundled into view and headed for Drake's flaming scout.

The Giant was at the lip of the crater among the fallen aliens looking back behind us, shouting and jumping in plainly evident joy, the smoking chaingun still cradled in his arms, scorched by the heat of the weapon. I turned and was greeted by the blessed sight of our arriving support, a dozen tanks followed by no less than three lumbering walkers and a line of rocket tanks churning up dust anew. The men in the crater were cheering and crying without shame. I didn't know whether to laugh or cry myself.

The lieutenant promoted me to corporal on the spot and put me in temporary charge of the platoon, despite my protests to the contrary. In characteristic fashion, he told me to stow it and follow my orders. The Giant's arms were badly burned by the chaingun and we expected him to be out of action for the better part of three months. He stubbornly returned to camp a month later, ready to get on with the fighting. Our platoon was decimated that day, the void subsequently filled mostly by fresh recruits. A relatively inexperienced sergeant was assigned to us and I spent the better part of the next two months training not only the recruits, but the sergeant as well. So much for being a green recruit. Ultimately, we were sent into battle again too soon, ill-equipped and undermanned. But that's another story.

Suddenly there was a flash on the horizon near the base of the mountain. An expanding dark cloud rose up and obscured the mountain top in a veil of grey haze. Immediately, four blips popped up on my radar screen, now clear of interference, all headed our way.

Mouse's voice crackled over the comm, "Target destroyed."

No other blips appeared. No one seemed to be perturbed about the destroyed equipment at all. We cautiously motored in to survey the area. The jammer was nothing now but a broken stump and scattered debris, metallic confetti sprinkled over a wide area. Just as Mouse had thought there was a bunker nearer the mountain. The doors stood open and we found it empty, abandoned. Nothing of any value left behind. One of the men did find what appeared to be a data disc on the floor inside, as if someone had carelessly dropped it in their haste to depart. I didn't believe it for a minute. If that disc wasn't planted for our entertainment, I was a monkey's kissing cousin.

We found no other evidence. No tracks. No trails. Nothing to lead us away from the bunker and the demolished jammer. It was as if whoever had been here had ascended straight to Heaven leaving no trace whatsoever. I was getting tired of this bizarre episode and was more than happy to head back to base where the Captain would be more than welcome to try to figure it all out. Maybe he'd be able to get something useful off the data disc. Whatever was going on, someone was obviously playing games with us and I did not like it one bit.

Later that evening the Captain called me to his quarters. I found him deep in thought, pensive. I asked about the data disc. He said that it was an ISDF archive disc. Most of the files still intact. How it got out there into that Scion bunker, he couldn't imagine. He had already sent the disc, the bio-metal button we'd found earlier and the comm-cam recording to the Major by courier.

"Did you ever meet an officer by the name of Cooke, Sergeant?" the Captain asked. I replied in the negative.

"Cooke was a buddy of mine back at training," he said. "We shipped out together when the ISDF first lost contact with the outpost on Pluto." I recalled the near-panic that had stirred up, how it had started this foul war with the

Scions. I had shipped out long after Pluto had been secured and never set foot on it's cold soil.

"While Cooke followed Shabayev down to Pluto, I joined a company on Charon." continued the Captain. "We didn't have much action there. Not like the bunch on Pluto. Apparently the Scions didn't see any value to securing the moon."

The Captain picked up a cup and filled it with something that looked and smelled vaguely like coffee. He offered me a cup and I declined. "Cooke beat me to the Dark Planet as well, and he was long gone on that Tom-fool crusade into the first wormhole with Braddock before I arrived."

The Captain took a sip from his cup and set it back down again. "I never saw him again. The last I ever heard about him involved that fiasco on Rend. Beyond that I never heard a word about him until today."

The Captain looked up at me and said, "Cooke's name figured prominently in the files on that data disc. There was a lot of meaningless data on it and most of the text was a record of mundane communications, nothing glaringly significant. But Cooke's name was all over it." The Captain paused meaningfully.

"Do you believe in coincidences, Sergeant?"

"No, Sir."

"Neither do I. Certainly not like those we've had today. And I have one more uncanny coincidence for you, Sergeant. You're going to like this one. I've received orders from the Major." The Captain had my unmitigated attention. "Tell the men to pack up. We're shipping out tomorrow for Rend."

SHIP INTELLIGENCE

Name: Leviathan
Race: Scion Collective
Mod: Rise of the Jenova
About: The Leviathan was created to respond to the more numerous scion rebels that had been launching attacks against outposts of the Collective. Instead of deploying more attack units in these lesser defended areas, the Leviathan was created to help the smaller sentries combat the attackers.

Letter from the Editor

Some of you maybe thinking, "What the heck is this?". This is my attempt at bringing together all the information around the Battlezone II world and creating a community Magazine that people can read. In essence, getting Battlezone II its very own Fan-zine.

The idea first started three months ago when I was reading an online E-zine and it made me think, "Why don't I put together a magazine that has updates on the mods so people can have a monthly update on their favorite game?"

That "I" turned in to a "we" very quickly as I began asking around on everybody's idea of the project and for submissions. I began also adding more in to the magazine like interviews, stories, tutorials, information, etc.

The major breakthrough that really got me going was the interview. I took a long shot and emailed Ken Miller seeing he would be interested in an interview. He said yes and the rest just fell in to place. Wug was kind enough to pen out a Tutorial, A story I liked a lot was picked for the story of the month, and slowly things fell in to place.

So, what I have here to present you is a compilation of everybody's hard work in one location in the hopes that this will be something that the Battlezone I & II community will like.

If all of you really like this idea and want to see another issue, then the team will begin putting a new one together. If not, then this will be the only issue ever created.

We hope that you enjoy this read!

Respectfully,

The Battlezone Magazine Team