

Q-and-A (Microsoft Interview with TerraTools Developers)

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The following text is the official Microsoft interview with several key [TerraTools Urban Assault](#) developers, that was originally available at the official Microsoft Urban Assault website.

Q & A with TerraTools, Developer of the Upcoming Microsoft Title Urban Assault

Urban Assault (code named Anarchy) is an innovative new title slated for release Summer of 1998. Combining strategic elements and first-person action, Urban Assault bombards the game player with the responsibility of bringing the Earth back from the brink of destruction. While this concept, in and of itself, might not be new to computer gaming, the way Urban Assault goes about the process of computer game generated world salvation is.

Several key members of [Terratools](#) (Urban Assault developers, based in Potsdam/Babelsberg Germany) recently visited the Microsoft Campus. Of course, the ever diligent Web Team took full advantage of this opportunity and with German phrase book in hand, we sat down and chatted about this upcoming title.

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1. How long has Terratools been around? How did it get its start?

Uli Weinberg (Producer, Owner and President of Terratools) - Personally, because I started so early, I'm considered the Grand Father of computer graphics in Germany. I came into this field working in TV stations and have worked in 3D computer graphics solutions and animations for 12 years. Additionally, I am a professor for computer animation and graphics at the HFF school for Film and Television in Babelsberg. I run the computer graphics department and am co-director of the film school. Then, four years ago, I looked at how the whole industry was starting to focus on the interactive. I began Terratools then, in January 1993 in Berlin. In July of 1993 we moved to the Churchill Villa, in Potsdam/Babelsberg.

2. Question - What is the story behind the Terratools headquarters at Churchill Villa? Isn't there a lot of history associated with this house?

Uli - Most definitely. The house is where Winston Churchill lived during the Potsdam Conference. In fact, there are famous photos of the three world power leaders (Churchill, Truman and Stalin) standing in front of the house. It was right next to the Wall (Berlin) too, it ran through the back yard.

3. - Is it true that some of the developers actually stay and live in the house during certain "crunch" times? What is that like? Especially since that house is so historical.

Andre Weissflog (Software lead) - It's pretty cool, especially because one only needs to fall out of the bed and roll a few stairs down to get to work.

Andreas Flemming (Software development) - Ok, it is a nice kind of working environment, but, after nearly one year in Potsdam and Seattle it is time for going home. I hope my landlord hasn't hired out my flat to another person.

Bernd Beyreuther (Game Design and 3D graphics) - He did not. I'm taking care of it...I think. Andre and Andreas, isn't it a great feeling to use the same bathtub as Winston Churchill?

Andre - Yuck - pphhht!!!

4. - Explain the concept of Urban Assault. What kind of game is it? Where does it fit as far as genre?

Uli - Bernd (who was a student of mine at the film school), Andre, and Andreas came up with the idea for this game about three years ago. Bernd was telling me a long time ago about all his ideas. When I first saw a quick demo I thought "incredible." I knew we had to publish it.

Bernd - It's 3D Action. The idea is that each player should be able to play this game in a different way and have fun. We give the player an army of specialized vehicles, which he/she can give orders to, or control directly. We give the player an overhead map for the strategic overview, and the Squad Manager window for finer and more detailed control over the squadron hierarchy. Those tools are integrated seamlessly into a rich, hostile 3D environment, full of bad guys. We don't force the player into any specific type of thinking. We give them the tools, and the power to survive, and throw them into interesting situations.

Andre - Uhhh... genres suck.

5. What was the inspiration for this game? For that matter, what were some of the inspirations for the differing [factions](#) and battle vehicles?

Bernd - It may sound strange if you look at our game, but our main inspiration was Populous. When we saw this game for the first time, we knew that this type of spirit in a game is what we want to do, and we still think so. And last but not least, when we watched Peter Molyneux demoing Magic Carpet to us (94 in Colonia) we got very inspired. This we call "The Magic Carpet Shock" - and it is also the start point of the development of Urban Assault.

The main ideas were:

- **to have tons of autonomous small things hurrying around**
- **to be able to fly over your land**
- **and to have this powerful station producing a lot of different vehicles**
- **all this in a dark future scenario**

Andre - There is no big master plan behind the different factions. We started programming, and from time to time (when we had enough), anyone of us hacked some fictitious background story fragments into the machine. All those pieces together gave quite an interesting scenario, which the writers at MS turned into a smooth and connected background story.

6. In your opinion, what are Urban Assault's most innovative features?

Bernd - Having a squadron of 30 or more different fighting vehicles, where you switch from one to another, battling dozens of enemies in a huge 3D City with hundreds of skyscrapers exploding around you in a multiplayer game is such a level of immersion I never had in any other game. So, this is probably the most innovative feature for me.

Andre - The [squadron manager](#) is pretty cool too. Technically, our 3D sound environment is not too bad either. Also, NOT having to switch between "first person mode" and "strategy mode" works out pretty nicely.

7. Urban Assault has the themes "Everything can be destroyed!", and "Power is everything" Are these then the two most overriding goals to the game?

Andre - If you define "Power" as "[Energy](#)" then this is probably true, because thoughtful management of the [energy](#) household is essential to a successful game session. Besides blasting the enemy off of the map of course.

8. How does one go about "winning the war" in Urban Assault?

Andre - Know what's going on around you. Try to figure out the primary types and number of enemies forces in the level. Are there even multiple enemy factions? Get an overview over the existing energy infrastructure of the level. MAKE A PLAN based on your observations. NEVER, NEVER, run out of energy. Have a network of power stations for escape-beaming the [host station](#) out of critical situations. Choose your units carefully to not waste energy with the wrong selection. Destroy the enemy energy system step by step. Keep away from the enemy host stations if you're not prepared for a big attack. Join your buddies in critical battles, adding the human factor gives you a bonus over the machine intelligence. Don't get carried away too much in the blood rush of a locale battle, keep an eye on the global situation from time to time. Be sure to control the situation completely before preparing for the attack on the enemy host station. Finally, blast the Big Mama into small gibly pieces!

9. AI is crucially important in any tactical game where you're managing a large military force in combat. Does Urban Assault have something in store for us to make this job easier?

Andre - The army is divided into squads, the structure and size of the squads can be controlled at any time by the player. Each squad can be given 1 out of 5 "aggressiveness levels" which influence their behavior and survival instinct. Normally, units escape back to the host station when they are seriously wounded, they will then refuel energy if a power station is nearby. The highest aggression level overrides this survival instinct, but also makes the units less responsive and sometimes attack useless targets. Similar advantage-at-a-cost parameters characterize the other aggression settings, but the default setting makes them behave much like the classical C & C (Command & Conquer) model.

10. With the first person perspective, how big a role will terrain have in tactics? On a related note, how will terrain affect vehicle choices?

Andre - There are no artificial hacks coded into the vehicles behavior routines for different terrain styles. How good or bad a vehicle performs on terrain depends solely on the polygonal shape of the terrain, and how good or bad the machine brain and the physical characteristics of the [drones](#) can deal with it. The user will soon find out that jets are not very effective in dense city environments, or that tanks are not optimal in mountainous areas, etc...

11. On a personal note, you three grew up in Eastern Germany, under the watchful eye of Big Brother Moscow. How did that influence your creative nature, especially in regards to computer gaming? What was it like?

Andre - Well, life in the GDR was more like "Big Blind Grandpa is trying to watch you."

Bernd - I really do not agree here, thought the spirit in the GDR was like old people's home, the regime was not a joke, but deadly serious! And - we all have been watched, sometimes by best friends.

Andre - We come from the province, and the government was considered to be far away, and a bunch of old senile men living in the past anyway

Bernd - Again I do not agree - the GDR was very close to you, if you were - (Only one small example!) a son of a pastor - you did not get the permission to study.

Andre - Yeah, but still it wasn't exactly a brutal military dictator, right? And compared to other communist countries, life in the East of Germany was relatively civilized.

Back to the fun stuff.

Surprisingly, I think the main factor that good young programmers grew up in the eastern countries was, that computer technology was 15 years behind the western states. We've been confronted with machine [language](#) and assembly, not with "wimpy" integrated development environments and very high level languages. If one starts with a high level language, and never cares about what code the compiler really produces, one doesn't get a feeling for what a computer is really able to do, be it a 1MHz or 300MHz machine. Once a programmers grasps the basics, it's easy to adopt to a higher level and more advanced concepts.

Andreas - I agree. When a computer scene grows up in the GDR it was possible and necessary to understand all of the computer. Many people built their own computers (I tried too and failed). Assembly was the only language for "real programs" and also the development was on a level where it was possible to

understand the machine. You can say "we grew up with the computer", like people in the US before Apple II (so I think).

Bernd - I do agree here. As an artist I still have some basic knowledge of C and scripting. This is a result of that we had to write our tools ourselves.

12. What are your thoughts on the current direction of computer gaming? Do you consider most of the games coming out now to be innovative, or just remakes of tried and true concepts?

Andreas - I think every idea was already here. We have new possibilities to realize it. And just like there is "dramaturgy rules" to make a film, it is most important to make an idea "playable". So was the situation before 3D, so is it now and it will not change in the future.

Andre - It's a pity however, how each game is a clone of another game today without adding even a little bit to the gameplay, look or style. I agree completely that the coolest things have a very simple idea as the core, but that's the algorithm, not the implementation.

Uli - I see the gaming industry evolving this direction, toward more hybrid games, combining different styles. The complexity is growing. With play testing, we've seen that people are concerned with Urban Assault being too complex. It seems that the younger a person is, the easier it is. I can go through the first three levels and then I'm stuck, but the younger players are demanding more complex stuff.

Massive multiplayer also demands new concepts and ideas which will work to attract players. I think with DVD and the ability to store so much more data you will see lots more changes. Right now we're trying to keep the data levels down to play over the Net. With better technologies, I see the Web becoming more of a gaming platform. Right now, however, no one really knows how to make money on the Web.

Stay tuned at the [Microsoft Games](#) Web site for the upcoming unveiling of the Urban Assault Web site and Thanks to Terratools for taking time to answer our questions. Guten Tag!

13. Tell us a little about yourself, how you became involved and interested in the computer gaming industry?

Andre - Ok, first, I think we're not really interested in the "industry" part of computer gaming. I don't want to see computer games go the same way as Hollywood movies, and that's what I'm thinking of first when I hear "computer gaming industry". Once we reach the point that computer games cost 50 million dollars, are designed by committee, crippled by the producers in an useless effort to hit the mainstream (or what they think the mainstream is), we will also have reached the end of all innovation.

But back to the question:

Basically, we known each other since our early teens, and started to explore the wonderful world of computers together.

Andre - I'm a programmer, age 25, started at age 13 with Z80 machine language (that's right, hacking hex numbers into the machine, with 256 bytes of RAM and a 6 digit led display there was no chance to get an assembler running). Got an KC85/3 (Z80 cpu, 16 KB RAM, 1.7 MHz, 16 color graphics) in '87, learned BASIC (what a useless effort), played around with Forth and Pascal, wrote a few small games in assembly. Bought an Amiga500 in '90, 3 days after the currency union with western Germany.

(Bernd - Me too.)

Learned m68k assembly and C. Got an Amiga 3000 in '92, wrote 1st 3D engine, wrote 2nd 3D engine, wrote 3rd 3D engine. Borrowed a 486 PC in '95 to port the existing parts of YPA to DOS in 3 weeks, learned x86

assembly that way. Still don't have my own PC in '97.

Andreas - As you will see in my other answers, I am not a classical gamer. At first I see myself as a programmer who is looking for projects, where I can experiment with new things, realize own ideas and having fun. What is in this case better than a computer game? Ok, it was in '84, when I read in a magazine about computers and I was fascinated from the beginning on. I learned BASIC without a computer.

(Bernd - He showed this to me - we went to school together - and I was fascinated too.)

Just for fun. When schools were equipped with computers I had first time contact to this "wonder weapons". Later I bought a KC 85/4, programmed this machine mostly in Z80-Assembler, but also in BASIC, Forth and Pascal.

In April '92 Amiga 3000 became payable and so I got one. This machine is today still in private and professional use. Since '95 I have fun with YPA.

Bernd - Basically an animator + artist I was fascinated by early east German Z80-machines, and because there were no paint programs, games etc. I had to program these things myself. The first real game I worked together with Andre was a Jump-n-Run for an old-fashioned GDR-homecomputer. Later I worked as programmer, CAD-trainer and studied classical character animation in Potsdam-Babelsberg and specialized in 3D Computer Animation. But because - although you make the greatest 3D-pictures - these are always only still (or a lot of stills = moving) - finally non-interactive - pictures, and I became some sort of bored with film and computer animation. To create 3D worlds and move around in it is much more fascinating than watching (even the best) rendered results/finished film - so I decided that my real THING are realtime-3D-games. Here I am.

(Archived from 1998.)