= Commander Keen in Invasion of the Vorticons =

 Commander Keen in Invasion of the Vorticons is a three @-@ part episodic side @-@ scrolling platform video game developed by Ideas from the Deep (a precursor to id Software) and published by Apogee Software in 1990 for MS @-@ DOS . It is the first set of episodes of the Commander Keen series . The game follows the titular Commander Keen , an eight @-@ year @-@ old child genius , as he retrieves the stolen parts of his spaceship from the cities of Mars , prevents an alien mothership that arrived while he was delayed from destroying landmarks on Earth , and hunts down the leader of the aliens , the Grand Intellect , on the alien home planet . The three episodes feature Keen running , jumping , and shooting through various levels while opposed by aliens , robots , and other hazards .
 In September 1990 , John Carmack , while working at programming studio Softdisk , developed a way to implement side @-@ scrolling video games on a personal computers (PCs) , which at the time was the province of dedicated home video game consoles . After a demo of a PC version of Super Mario Bros. 3 developed by Carmack and his coworkers John Romero and Tom Hall , along with Jay Wilbur and Lane Roathe , failed to convince Nintendo to invest in a PC port of their game , they were approached by Scott Miller of Apogee Software to develop an original game to be published through the Apogee shareware model . Hall designed the three @-@ part game , Carmack and Romero programmed it , Wilbur managed the team , and artist Adrian Carmack helped later in development . The team worked continuously for almost three months on the game , working late into the night at the office at Softdisk and taking their work computers to John Carmack 's home to continue developing the game .
 Released by Apogee on December 14 , 1990 , the trilogy of episodes was an immediate success ; Apogee , whose monthly sales had been around US $ 7 @,@ 000 , made US $ 30 @,@ 000 on Commander Keen alone in the first two weeks and US $ 60 @,@ 000 per month by June , while the first royalty check convinced the development team , then known as Ideas from the Deep , to quit their jobs at Softdisk . The team founded id Software shortly thereafter , and went on to produce another four episodes of the Commander Keen series over the next year . The trilogy was lauded by reviewers due to the graphical achievement and humorous style , and id Software went on to develop other successful games , including early successes Wolfenstein 3D (1992) and Doom (1993) .

 = = Gameplay = =

 The three episodes of Commander Keen in Invasion of the Vorticons make up one side @-@ scrolling platform video game : most of the game features the player @-@ controlled Commander Keen viewed from the side while moving on a two @-@ dimensional plane . The player can move left and right and can jump ; after finding a pogo stick in the first episode , they can also bounce continuously and jump higher than they can normally with the correct timing . The levels are composed of platforms on which Keen can stand , and some platforms allow Keen to jump up through them from below . The second episode introduces moving platforms as well as switches which extend bridges over gaps in the floor . Once entered , the only way to exit a level is to reach the end , and the player cannot save and return to the middle of a level . In between levels the player travels on a two @-@ dimensional map , viewed from above ; from the map the player can enter levels by approaching the entrance or save their progress in the game . Some levels are optional and can be bypassed , while others are secret and can only be reached by following specific procedures .
 Each of the three episodes contain a different set of enemies in their levels , which the player must kill or avoid . The first episode includes alien Martians , the second largely uses robots , and the third more species of aliens . All three episodes also include Vorticons , large blue canine @-@ like aliens . Levels can also include hazards , such as electricity or spikes ; touching a hazard or most enemies causes Keen to lose a life , and the game is ended if all of Keen 's lives are lost . After finding a raygun in the first episode , Keen can shoot at enemies using ammo found throughout the

game ; different enemies take differing numbers of shots to kill , or in some cases are immune . Some enemies can also be stunned if they are jumped on , such as the one @-@ eyed Yorps , which block Keen 's path but do not harm him . The player can also find food items throughout the levels which grant points , with an extra life awarded every 20 @,@ 000 points . There are also colored keycards which grant access to locked parts of levels , and in the third episode on rare occasions an ankh , which gives Keen temporary invulnerability .

= = Plot = =

The game is broken up into three episodes : " Marooned on Mars " , " The Earth Explodes " , and " Keen Must Die ! " . In the first episode , eight @-@ year @-@ old Billy Blaze , a child genius , builds a spaceship and puts on his older brother 's football helmet to become Commander Keen . One night while his parents are out of the house he flies to Mars to explore ; while away from the ship the Vorticons steal four vital components and hide them in Martian cities . Keen journeys through Martian cities and outposts to find the components , despite the efforts of Martians and robots ; the final component is guarded by a Vorticon . Keen returns to Earth ? discovering a Vorticon mothership in orbit ? and beats his parents home , though they discover that he now has a pet Yorp .

In the second episode , the Vorticon mothership has locked its " X @-@ 14 Tantalus Ray cannons " on eight of Earth 's landmarks , and Keen journeys to the ship to find and deactivate each of the cannons . Keen does so , fighting more varied enemies and hazards , and a Vorticon at each cannon 's control . At the end of the episode he discovers that the Vorticons are being mind @-@ controlled by the mysterious Grand Intellect , who is actually behind the attack on Earth . In the third episode , Keen journeys to the Vorticon homeworld of Vorticon VI to find the Grand Intellect . He travels through Vorticon cities and outposts to gain access to the Grand Intellect 's lair , fighting mostly against the Vorticons themselves . Upon reaching the lair he discovers that the Grand Intellect is actually his school rival Mortimer McMire , whose IQ is " a single point higher " than Keen 's . Keen defeats Mortimer and his " Mangling Machine " , and frees the Vorticons ; the Vorticon king and " the other Vorticons you haven 't slaughtered " then award him a medal for saving them .

= = Development = =

In September 1990 , John Carmack , a game programmer for the Gamer 's Edge video game subscription service at Softdisk in Shreveport , Louisiana , developed a way to create graphics which could smoothly scroll in any direction in a computer game . At the time , IBM @-@ compatible general @-@ purpose computers were not able to replicate the common feat of video game consoles such as the Nintendo Entertainment System , which were capable of redrawing the entire screen fast enough for a side @-@ scrolling video game due to their specialized hardware . Carmack , rejecting the " clever little shortcuts " that other programmers had attempted to solve the problem , created adaptive tile refresh : a way to slide the majority of the visible screen to the side both horizontally and vertically when the player moved as if it had not changed , and only redraw the newly @-@ visible portions of the screen . Other games had previously redrawn the whole screen in chunks , or like Carmack 's earlier games were limited to scrolling in one direction . He discussed the idea with coworker Tom Hall , who encouraged him to demonstrate it by recreating the first level of the recent Super Mario Bros. 3 on a computer . The pair did so in a single overnight session , with Hall recreating the graphics of the game ? replacing the player character of Mario with Dangerous Dave , a character from an eponymous previous Gamer 's Edge game ? while Carmack optimized the code . The next morning on September 20 , the resulting game , Dangerous Dave in Copyright Infringement , was shown to their other coworker John Romero . Romero recognized Carmack 's idea as a major accomplishment : Nintendo was one of the most successful companies in Japan , largely due to the success of their Mario franchise , and the ability to replicate the gameplay of the series on a computer could have large implications . The scrolling technique did not meet Softdisk 's coding guidelines , however , as it needed at least a 16 @-@ color EGA graphics processor , and

the programmers in the office who did not work on games were not as impressed as Romero .

 Romero felt that the potential of Carmack 's idea should not be " wasted " on Softdisk ; while the other members of the Gamer 's Edge team more or less agreed , he especially felt that their talents in general were wasted on the company , which needed the money their games brought in but in his opinion neither understood nor appreciated video game design as distinct from general software programming . The manager of the team and fellow programmer , Jay Wilbur , recommended that they take the demo to Nintendo itself , to position themselves as capable of building a PC version of Super Mario Bros. for the company . The group ? composed of Carmack , Romero , Hall , and Wilbur , along with Lane Roathe , the editor for Gamer 's Edge , decided to build a full demo game for their idea to send to Nintendo . As they lacked the computers to build the project at home , and could not work on it at Softdisk , they " borrowed " their work computers over the weekend , taking them in their cars to a house shared by Carmack , Wilbur , and Roathe . The group then spent the next 72 hours working non @-@ stop on the demo , which copied Super Mario Bros. 3 with some shortcuts taken in the artwork , sound , and level design , and a title screen which credited the game to the programmers under the name Ideas from the Deep . The response from Nintendo a few weeks later was not as hoped for , however ; while Nintendo was impressed with their efforts , they wanted the Mario series to remain exclusive to Nintendo consoles .

 Around the same time as the group was rejected by Nintendo , Romero was receiving fan mail about some of the games he had developed for Gamer 's Edge . Upon realizing that , despite the different names used , all of the letters came from the same address ? that of Scott Miller of Apogee Software ? he wrote back an angry reply , only to receive a phone call from Miller soon after . Miller explained that he was trying to get in contact with Romero unofficially in order to convince him to publish more levels for his previous Pyramids of Egypt ? an adventure game where the player navigates mazes while avoiding Egyptian @-@ themed traps and monsters ? through Apogee 's shareware model . Miller was pioneering a model of game publishing where part of a game would be released for free , with the remainder of the game available for purchase from Apogee . Romero said the he could not , as Pyramids of Egypt was owned by Softdisk , but that it did not matter as the game he was now working on was much better , and sent Miller the Mario demo . Miller was impressed , and the two agreed that Ideas from the Deep would create a new game for Apogee . Miller sent the group a US $ 2 @,@ 000 advance in return for an agreement that they would create a game before Christmas of 1990 , only a few months away . The game was planned to be split into three parts to match Apogee 's shareware model of giving away the first part for free to attract interest in the whole .

 Ideas from the Deep convened to come up with the design for the game , and Hall suggested a console @-@ style platformer in the vein of Super Mario Bros. , as they had the technology made for it ; he further recommended a science fiction theme . John Carmack added the idea of a genius child protagonist saving the world , and Hall quickly created a short summary for the game : a dramatic introduction about eight @-@ year @-@ old genius Billy Blaze , defending the Earth with his spaceship . When he read out the summary in an over @-@ dramatic voice to the group , they laughed and applauded , and the group agreed to begin work on Commander Keen in the Invasion of the Vorticons .

 Billy Blaze , eight year @-@ old genius , working diligently in his backyard clubhouse has created an interstellar starship from old soup cans , rubber cement and plastic tubing . While his folks are out on the town and the babysitter has fallen asleep , Billy travels into his backyard workshop , dons his brother 's football helmet , and transforms into ...
 COMMANDER KEEN--defender of Earth !
 In his ship , the Bean @-@ with @-@ Bacon Megarocket , Keen dispenses galactic justice with an iron hand !
 The Ideas from the Deep team , who referred to themselves as the " IFD guys " , could not afford to leave their jobs to work on the game full @-@ time , so they continued to work at Softdisk , spending their time on the Gamer 's Edge games during the day and on Commander Keen at night . They also continued to take home their work computers to Carmack 's house on the weekends , putting them in their cars at night and bringing them back in the morning before anyone else arrived

; they even began to request upgrades to the computers from Softdisk , nominally for their work . The group split into different roles : Hall became the game designer and creative director , John Carmack and Romero were the programmers , and Wilbur the manager . They invited artist Adrian Carmack from Softdisk to join them late in development , while Roathe was soon kicked out of the group ; Romero , the self @-@ appointed leader of the team , liked him but felt that his work ethic did not match well with the rest of the team , and pushed for his removal . Ideas from the Deep spent nearly every waking moment when they were not working at Softdisk from October through December 1990 working on Commander Keen , with Wilbur forcing them to eat and take breaks . Several members of the team have mentioned in interviews as an example of the team 's commitment a night during development when a heavy storm flooded the path to get to the house , preventing them from working , and John Romero waded through a flooding river to make it to the house anyways .

The game 's design was largely driven by Tom Hall : Romero and especially John Carmack were focused almost exclusively on the programming ; Wilbur was not involved in the game 's design ; and Adrian Carmack joined late in development and found the project 's " cute " art style , till then mostly created by Hall , far @-@ removed from his preferred , darker , style . Consequently , he did not try to implement his own design ideas . Hall 's personal experiences and philosophies , therefore , strongly impacted the game : Keen 's red shoes and Green Bay Packers football helmet were items Hall wore as a child , dead enemies left behind corpses due to his belief that child players should be taught that death had permanent consequences , and enemies were based loosely on his reading of Sigmund Freud 's psychological theories , such as that of the id . Other influences on Hall for the game were Duck Dodgers in the 24 ½ th Century and other Chuck Jones cartoons , and " The Available Data on the Worp Reaction " , a short story about a child constructing a spaceship . Keen 's " Bean @-@ with @-@ Bacon " spaceship was taken from a George Carlin skit about using bay leaves as deodorant so as to smell like soup . Keen was intended to be a reflection of Hall as he had wanted to be as a child . The team separated the game from its Super Mario Bros. roots by adding non @-@ linear exploration and additional mechanics like the pogo stick . A suggestion from Miller that part of the popularity of Super Mario Bros was the presence of secrets and hidden areas in the game led Hall to add several secrets , such as an entire hidden level in the first episode , and a " Galactic Alphabet " in which signs in the game were written , which if deciphered by the players revealed hidden messages , jokes , and instructions .

As the game neared completion , Miller began to market the game to players . Strongly encouraged by the updates the team was sending him , he began heavily advertising the game in all of the bulletin board systems (BBS) and game magazines he had access to , as well as sending the team US $ 100 checks every week labelled " pizza bonus " after one of the game 's food items to keep them motivated . The game was completed in early December 1990 , and on the afternoon of December 14 Miller began uploading the completed first episode to BBSs , with the other two episodes listed as available for purchase as a mailed plastic bag with floppy disks for US $ 30 .

== Reception ==

Commander Keen was an immediate hit for Apogee : the company 's previous sales levels had been around US $ 7 @,@ 000 per month , but by Christmas Keen already had sales of almost US $ 30 @,@ 000 . Miller described the game as " a little atom bomb " to magazine editors and BBS controllers when asked about it , and recruited his mother and hired his first employee to handle sales and phone calls from interested players . By June 1991 , the game was bringing in over US $ 60 @,@ 000 per month . Chris Parker of PC Magazine later in 1991 referred to the game 's release as a " tremendous success " .

A contemporary review by Barry Simon of PC Magazine praised the game 's graphical capabilities as having a " Nintendo feel " , though he termed the graphics as " well drawn " but " not spectacular " in terms of resolution . He noted that the game was very much an arcade game that players would not purchase for " its scintillating plot or ground @-@ breaking originality " , but said that all three episodes were very fun to play and that the scrolling graphics set it apart from similar games . A

short summary of the trilogy in 1992 by PC World termed it " one of the most spectacular games available " and praised the " superb " sound and graphics , and a similar summary in CQ Amateur Radio described it as " Nintendo comes to the PC " and the " best action / adventure game " the reviewer had ever seen . In October 1992 , the Shareware Industry Awards gave the Commander Keen series the " Best Entertainment Software and Best Overall " award . A review of the entire Commander Keen series in 1993 by Sandy Petersen in the first " Eye of the Monitor " column for Dragon described the series as action games with " hilarious graphics " . Acknowledging its debt to Super Mario Bros. , he called it , including the Vorticon trilogy , " one of the best games of its type " and praised it for not being " mindlessly hard " , instead requiring some thought to play through , and especially for the humor in the graphics and gameplay .

= = Legacy = =

Ideas from the Deep 's first royalty check from Apogee in January 1991 for US $ 10 @,@ 500 convinced them that they no longer needed their day jobs at Softdisk but could devote themselves full @-@ time to their own ideas . Hall and Wilbur were concerned about the risk of being sued if they did not break the news gently to Softdisk , but Romero and John Carmack were dismissive of the possibility , especially as they felt they had no assets for which they could be sued . Shortly thereafter , John Carmack was confronted by their boss and owner of Softdisk , Al Vekovius , who had become suspicious of the group 's increasingly erratic , disinterested , and surly behavior at work , as well as their multiple requests for computer upgrades . Vekovius had been told by another employee that the group were making their own games , and felt that Carmack was generally incapable of lying ; Carmack in turn bluntly admitted that they had made Keen with Softdisk computers , that they felt no remorse for their actions , and that they were all planning on leaving . Vekovius felt that the company was reliant on the Gamer 's Edge subscriptions , and tried to convince the group to instead form a new company in partnership with Softdisk ; when Ideas from the Deep made no secret of the offer in the office , however , the other employees threatened to all quit if the team was " rewarded " for stealing from the company . After several weeks of negotiation , the Ideas team agreed to produce a series of games for Softdisk , one every two months , and on February 1 , 1991 , founded id Software .
In the summer of 1991 , id hosted a seminar for game developers with the intention of licensing the Commander Keen engine ; they did so , forming the spiritual predecessor to both QuakeCon and id 's standard of licensing their game engines . Id Software also produced several more games in the Commander Keen series ; the first of these , Commander Keen in Keen Dreams , was published in 1991 through their agreement with Softdisk . Commander Keen in Goodbye , Galaxy , composed of the episodes " Secret of the Oracle " and " The Armageddon Machine " , was published through Apogee in December 1991 , and the final id @-@ developed Keen game , Commander Keen in Aliens Ate My Babysitter , was published through FormGen around the same time . Another trilogy of episodes , titled The Universe Is Toast ! , was planned for December 1992 , but was cancelled after the success of id 's Wolfenstein 3D and development focus on Doom . A final Keen game , Commander Keen , was developed for the Game Boy Color in 2001 by David A. Palmer Productions in association with id Software , and published by Activision . The original trilogy has been released as part of several collections since its first release : the id Anthology compilation in 1996 , a compilation release by Apogee in 1998 of Invasion of the Vorticons and Goodbye , Galaxy , and the 3D Realms Anthology in 2014 . They have also been released for modern computers through a DOS emulator , and sold through Steam since 2007 as a part of the Commander Keen Complete Pack . According to Steam Spy , as of June 2016 approximately 200 @,@ 000 copies have been sold through Steam .