An Interview with Robert B. Brown

aka. Brian Brown

Author of the Sega Programming Manual
And numerous Grandstand program's.

Date of Interview: **29th May to 5th June 2008**
Interviewer: **Aaron Wheeler**

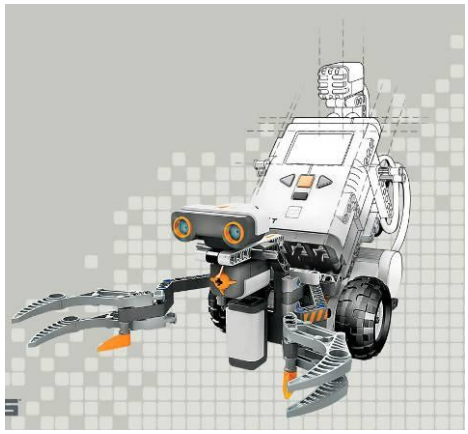
AW> Thanks for taking the time to answer our questions Brian, or do you prefer to be called Robert?

RBB> It's part of the Gulf mentality - everyone is called by their first name, where as for the first 40+ years of my life, in New Zealand, I was called by my middle name. It took a bit of getting used to at first on arrival here. I guess people thought I was deaf for the first few months as I wasn't responding to Robert... However, after 8 years I seem to have adapted.

AW> Maybe you can start out by telling us a little about yourself and where you currently reside?

RBB> I currently reside in the UAE, been here since 2000, Previously Dept Chair IT Programs at Abu Dhabi Women's College. *I am* now working on Accreditation issues, for the Higher Colleges of Technology in Abu Dhabi. Since arriving in the UAE, I masterminded the UAE Educational IT Challenge http://www.uaechallenge.com and the HCT Robotics Challenge http://www.uaerobotchallenge.com.

AW> The Robotics Challenge looks great. Using the Lego 9797 Mindstorm set, there seems to be some challenging missions set. You say you masterminded that event, how did that come about? How well do the teams normally do in the challenges?



RBB> It came about because the students in Higher Diploma struggle with programming concepts, this is their first programming course, and they normally start with Visual Basic. We needed something simpler that would teach them programming, be easy to use, and also help them migration concepts to VB later. Being interactive, when they make a mistake the robot goes astray, it's good. And the teams did very well.

AW> Was the Sega SC-3000 your first computer? Or had you owned others prior?

RBB> No, I *had* owned a Disk Smith computer based on the TRS80. I rewrote the file system in assembler to support hieracherical folders and files (TRSDOS). I *also* briefly owned an Atari 800XL and ZX81.

AW> What Sega Hardware did you own and use? Do you still own any Sega Hardware?

RBB> *I had a* SC3000 with expansion unit *[SF-7000]*. No *I don't.*

AW> Why did you purchase a Sega SC-3000?

RBB> Price and it's sound/graphics capability.

AW> What aspect of the Sega SC-3000 hardware would you have liked to have seen improved at the time?

RBB> More memory *and* better expansion capabilities. Use of standard floppy disks.

AW> Can you tell us how you got into programming for the Sega SC-3000?

RBB> There was not much support so I first wrote a dissembler. Then I disassembled the ROM (was about 4 large boxes of printouts), then started to figure out what each of the ROM routines did, hence some of these were published as articles.

AW> How did you learn to Program in BASIC and Machine Code?

RBB> *I was* self taught. In the late 60's early 70's I did a number of courses in assembly, then started to program a mini-computer Data General MV6000 in assembler and BASIC.

AW> Did you originally start programming for fun or as a hobby then turn professional, or were you working professionally from the start?

RBB> I was teaching Software Engineering, Operating Systems, Networking and Embedded Systems at the Central Institute of Technology *[in Upper Hutt, New Zealand],* so playing with the Sega was only a hobby.

AW> What was your approach in developing a program? Did you plan it all out on paper, and then start coding, or was it more hands on to start with?

RBB> I planned it all in my head first. I remember a rather large one, *an* adventure type game that I wrote, took about three weeks to code, but all the graphics and algorithms were worked out first before I coded. I tend to program in blocks (some might say modules), so coding and testing was easier. The program just then needed to link all the blocks together in order to work.

AW> Did you code alone or as a team?

RBB> I coded by myself.

AW> Did you test all your own programs? Or did you have some friends or colleagues that you could call on for testing them?

RBB> Some friends offered to test the programs. However, I used to do very rigorous testing during the coding phase.

AW> How long did it take to program the average program and bug fix?

RBB> About 2 weeks or less. Some I developed in less than a day.

AW> How did you go about duplicating and marketing a program once it was finished?

RBB>. Most were copied using tape cassettes. Marketing was sometimes done via Grandstand and magazines, however, word of mouth was very effective. After the cost of the tapes and time involved, it was never going to pay for itself.

AW> What was the biggest challenge you remember that you had to overcome getting a program to market?

RBB> There was never any problems except that marketing through normal channels like Grandstand was not economical. The price they paid for developed software was very, very low. We were never paid royalties, only a flat one off fee which was miniscule at the time.

AW> What was the software market like for the Sega SC-3000?

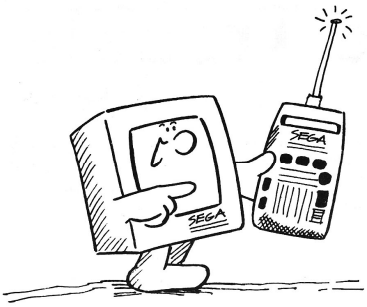
RBB> When it, *the SC-3000*, first came out it was very poor. The support for developers was non-existent. They would not release details of the ROM or any special routines. This stifled the ability of people to write in anything but BASIC.

AW> Of your own software, which do you like the most? Which would you have liked to improve?

RBB> The Adventure program. Limitations of memory required me to reduce the graphics which was a shame. Of the others, I remember little.

AW> Were your programs well received at the time? How well did they sell?

RBB> They were very popular. A lot were given away for next to nothing. It would be an overstatement that I actually made any money.



Part 1
The SEGA Computer -
AN OVERVIEW by Brian Brown

The SEGA SC3000 home computer is an excellent addition to the computer scene with information, good graphics and sound. This seeks to add to the growing knowledge of the internal workings of the SEGA, and in so doing, help others in their search for better and quicker ways of programming.

AW> Did you write any programs that didn't make it to market?

RBB> I had worked on a C Compiler. There just wasn't the market in NZ to release it.

AW> Do you think the companies that supported the Sega SC-3000 did a good job with their support, or did they leave the Sega to it's own devices?

RBB> They only wanted to sell games, they were not interested in trying to develop a community of users as such.

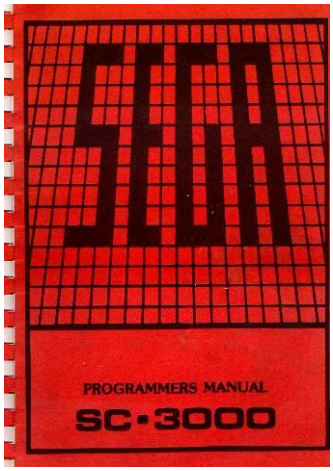
AW> If you could go back to the 80's and start again, would you have stayed with the Sega platform for as long as you did, or would you have bypassed the Sega and coded for another platform?

RBB> I had fun with the Sega, it taught me a lot. I don't regret using it at the time.

AW> Did you contribute to any of the Sega Magazines of the day?

RBB> Yes, *for both the Sega Computer and Computer Input magazines*. For how long I cannot remember. The majority of this was unpaid at the time.

AW> Tell us about the book you wrote for the Sega SC-3000. How did that come about?



RBB> It came about because trying to get anything technical about the Sega was next to impossible. I had done embedded assembler (hiding assembly language in BASIC) on the TRS80, I figured why not on the SEGA, as the BASIC was slow and limited graphic wise, so hence the desire to deconstruct the ROM. The book was the result of many months and long hours of investigation and trial and error. But it put better tools in developers hands for improving their programs.

AW> What did you do after the Sega Market dried up

RBB> For me the next step was UNIX and the PC platform.

AW> What is your best memory of the Sega SC-3000 era?

RBB> One of the very first meetings of the *Wellington Sega* User Club was held in my flat in Adelaide Road. I think meeting other users and sharing ideas, Software, FAQ etc was great**.**

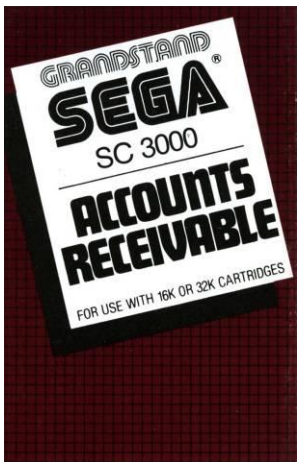
AW> What were your favourite Sega cartridge games?

RBB> I wasn't really into playing games. For me the fun was in discovery and getting to know how it worked.

AW> How has the US led war in Iraq affected you while living and working in the Middle East? Is there any security concerns, or has Abu Dhabi managed to avoid those problems.

RBB> None, earlier during the Kuwait invasion there were a few demonstrations against the US but this was quickly stopped by the local authorities. It's very safe.

AW> Can you list for us all the Sega SC-3000 programs you were involved with? We've compiled a small list of your known works but we are most likely missing some.



RBB> Sorry, I just don't recall them. I know I did write a lot of different programs though.

Cassette Tapes:

Accounts Payable	Grandstand
Accounts Receivable	Grandstand
BASIC Merge Utility	Hi Tech Programming
Empire	Hi Tech Programming
Empire	Grandstand
Jackpot	Hi Tech Programming
Lawn	Hi Tech Programming
Lunar Rescue	Hi Tech Programming
Mailing List	Grandstand
Mailing List	John Sands
Pattern Editor	Hi Tech Programming
Russian Roulette	Hi Tech Programming
Space Trek	Hi Tech Programming
The Forbidden Zone Pt 1 to 3	Grandstand
Wizards Castle	Hi Tech Programming

Magazine Type In's:

Alien Attack	Nomac	1984	Sega Programmers Manual
Auto Load & Run BASIC Programs	Nomac	1984	Sega Programmers Manual
Basic Key-Scan Program	Nomac	1984	Sega Programmers Manual
Basic Merger	Nomac	1984	Sega Programmers Manual
Character Manipulator	Nomac	1984	Sega Programmers Manual

Converter, Dec to Bin or Hex	Sega Computer	1986	Jul/Aug Issue
Crossroads	Nomac	1984	Sega Programmers Manual
Error Message Lister	Sega Computer	1986	Jul/Aug Issue
Graphics Demo Program	Computer Input	1984	Feb Issue
Graphics Mode 1 Demo	Computer Input	1985	Mar Issue
Load Header to Video Screen	Nomac	1984	Sega Programmers Manual
Load Program Bytes to Video Screen	Nomac	1984	Sega Programmers Manual
Mcode Demonstration	Nomac	1984	Sega Programmers Manual
Multicolour Mode Demo	Nomac	1984	Sega Programmers Manual
Multicolour Mode Demo	Computer Input	1985	Mar Issue
Music Editor	Nomac	1984	Sega Programmers Manual
One Armed Bandit Lvl IIIa/b	Nomac	1984	Sega Programmers Manual
Parachute	Computer Input	1984	Mar Issue
Pattern Editor	Nomac	1984	Sega Programmers Manual
Sprite Collision Demo	Nomac	1984	Sega Programmers Manual
Sprite Demo	Nomac	1984	Sega Programmers Manual
Startrek Lvl IIIb	Nomac	1984	Sega Programmers Manual
Text Screen Swap	Nomac	1984	Sega Programmers Manual
Text Screen Swapper (BASIC)	Computer Input	1985	Feb Issue
Text Screen Swapper (MC)	Computer Input	1985	Feb Issue

Magazine Articles:

Exploring the Sega	Computer Input	1984	Feb Issue
Exploring the Sega - Display Screens	Computer Input	1985	Mar Issue
Exploring the Sega - Print Statement	Computer Input	1985	Feb Issue
Exploring the Sega - Program Conversion	Computer Input	1984	Aug Issue
Exploring the Sega - Visual Display Processor	Computer Input	1984	Sep Issue
Exploring the Sega - Visual Display Processor	Computer Input	1984	Jul Issue
Exploring the Sega III	Computer Input	1984	Mar Issue
Extending Your Sega	Sega Computer	1984	Aug Issue
Sega Input	Computer Input	1984	May Issue
Sega Input - Seg Sound Generator	Computer Input	1984	Apr Issue
The Sega Computer, Pt.1 An Overview	Sega Computer	1986	Jul/Aug Issue
The Sega Computer, Pt.2 Visual Display Processor	Sega Computer	1986	Sep/Oct Issue
The Sega Computer, Pt.3 Sound Generator	Sega Computer	1986	Nov/Feb Issue
The Sega Computer, Pt.4 Cassette Routines	Sega Computer	1986	Nov/Feb Issue
The Sega Computer, Pt.5 Keyboard & Joysticks	Sega Computer	1986	Nov/Feb Issue
The Sega Computer, Pt.6 Final	Sega Computer	1987	Mar/Jun Issue
The Sega Saga Continued	Computer Input	1984	Oct Issue
The Sega Saga Continues	Computer Input	1984	Nov Issue
The Unexplained Sega Commands Pt.1	Sega Computer	1984	Aug Issue
The Unexplained Sega Commands Pt.2	Sega Computer	1984	Sep Issue

AW> What do you think of our project www.SC-3000.com, and our aim of becoming the 'Go To' resource for everything Sega SC-3000 related?

RBB> Nostalgia is very powerful. It's good that important events during the early days of the computer age are documented and archived.

AW> Thank you for chatting with us Robert. It was good to hear from you, and your perspective on the SC3000.

SEGA SC-3000
PARACHUTE
B. BROWN

Special instructions:

1: Run program.
2: Press break.
3: Change line 150, the first print statement to include the user defined graphics. In order they are SPACEBAR, ENGDIERS I, ENGDIERS 2, ENGDIERS 2, ENGDIERSQ, SPACEBAR
4: Change line 200, the first print statement to ENGDIERSW i.e. print "ENGIERSW" where ENGDIERSW is the ENGDIERS key AND W key pressed together.
5: Change first PRITN statement in line 90 to be GRAPHICS E, GRAPHICS V and GRAPHICS R
6: Line 90, 2nd PRINT statement to be GRAPHICS T
7: Liens 100 and 120, to be GRAPHICS shifted U
8: Line 130 to be GRAPHICS T
9: LINE 170 and 200, last PRINT statements to be GRAPHICS Y i.e., the little man
10: SAVE THE PROGRAM TO TAPE!!!

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10 SC=0:J=11
20 PATTERNC#&HA0,"F0F0F8FCFEFFFFFF":PA
TTERNC#&HA1,"0000000000FFFFFF":PATTERN
C#&HA2,"0000000000F0FCFC"
30 PATTERNC#&HA3,"0000304884848448"
40 SCREEN 1,1:CLS:PRINT"Do you need in
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