

No.1

CAPTAIN ZILOG!



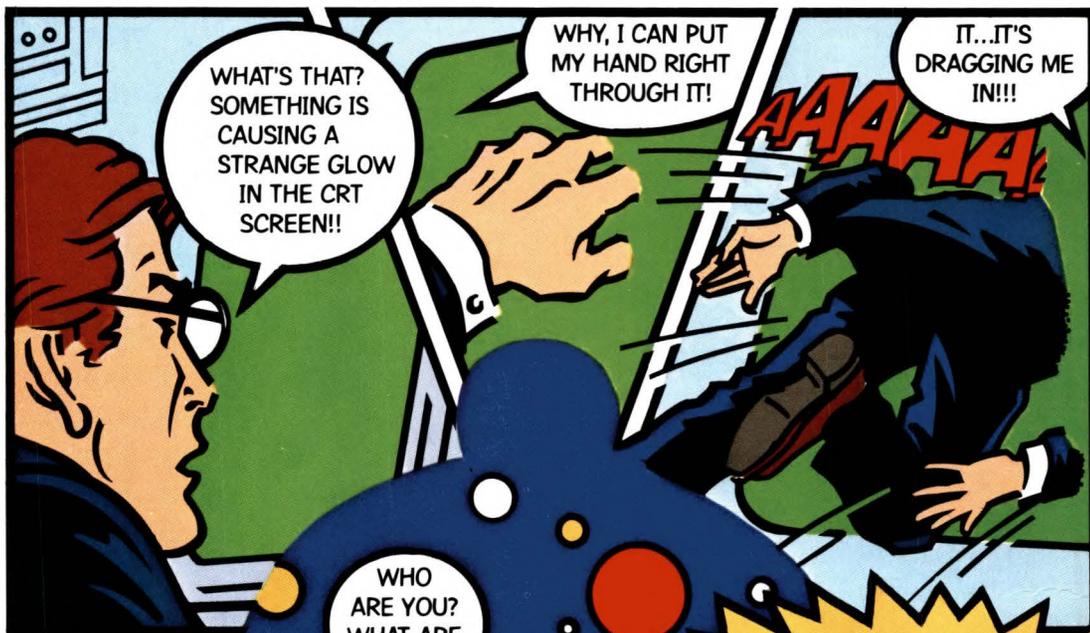
WESCON/79
COLLECTOR'S
EDITION

THE
ORIGIN
OF

CAPTAIN ZILOG



SYSTEMS DESIGNER NICK STACEY WORKS LATE INTO THE NIGHT. UNKNOWN TO HIM, A SMALL EERIE COMET PASSES OVERHEAD...

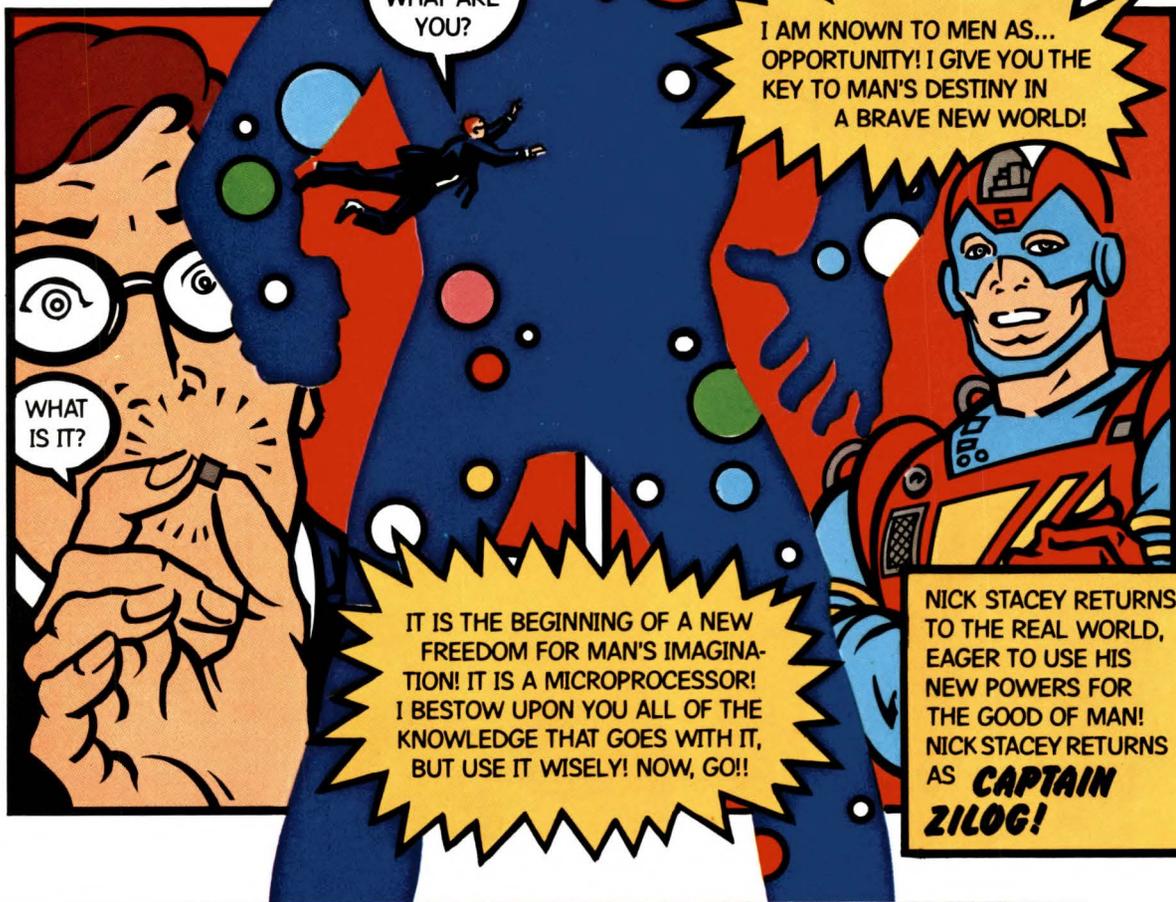


WHAT'S THAT?
SOMETHING IS
CAUSING A
STRANGE GLOW
IN THE CRT
SCREEN!!

WHY, I CAN PUT
MY HAND RIGHT
THROUGH IT!

IT...IT'S
DRAGGING ME
IN!!!

AAAAAA!



WHO
ARE YOU?
WHAT ARE
YOU?

I AM KNOWN TO MEN AS...
OPPORTUNITY! I GIVE YOU THE
KEY TO MAN'S DESTINY IN
A BRAVE NEW WORLD!

WHAT
IS IT?

IT IS THE BEGINNING OF A NEW
FREEDOM FOR MAN'S IMAGINA-
TION! IT IS A MICROPROCESSOR!
I BESTOW UPON YOU ALL OF THE
KNOWLEDGE THAT GOES WITH IT,
BUT USE IT WISELY! NOW, GO!!

NICK STACEY RETURNS
TO THE REAL WORLD,
EAGER TO USE HIS
NEW POWERS FOR
THE GOOD OF MAN!
NICK STACEY RETURNS
AS **CAPTAIN
ZILOG!**

CAPTAIN ZILOG!

THE USUAL MIDDAY HUSTLE AND BUSTLE OF DOWNTOWN CITYVILLE IS ABOUT TO BE INTERRUPTED BY A STRANGE VISITOR! TALK ABOUT HIDING THE KEY TO THE CITY!!

CITIZENS OF CITYVILLE!! I, DR. DIABOLICUS, AM NOW YOUR SUPREME MASTER!!

AMID THE STARTLED CROWD ARE SYSTEMS DESIGNER NICK STACEY, AND HIS FRIEND, ANNE...

LEAPIN' LOGIC, ANNE! LOOK AT THAT THING!

PROBABLY JUST A PUBLICITY GIMMICK...

"THE DOOM OF DR. D!"

HEY!
WHERE'D
HE GO?

IT'S AS
BIG AS A
SKYSCRAPER,
NICK!



I HATE TO LEAVE
ANNE ALONE, BUT
THIS SITUATION
CALLS FOR
CAPTAIN ZILG!



MOMENTS LATER, IN THE REST
ROOM OF A SWANK NEIGHBOR-
HOOD RESTAURANT...

THE...FIRE-
WORKS...HAVE
JUST...



SPROUTING SIX MECHANICAL
LEGS, THE STRANGE
SPACECRAFT SETTLES TO
EARTH LIKE A GIANT
INSECT...



THAT
SPACESHIP
THING IS
LANDING!

THERE'S
CAPTAIN
ZILG! HE'LL
KNOW WHAT
TO DO!

MY LOYAL SUBJECTS!!
I AM DIABOLICUS,
CONQUEROR OF ALL
TIME AND SPACE!
(I ALSO HAVE A LITTLE
MAIL-ORDER COM-
PUTER REPAIR SCHOOL
ON THE SIDE IN
SANTA CLARA!)



MY SATELLITE STATION
ORBITS YOUR PLANET
AT THIS VERY MOMENT!
IT AND THIS MACHINE
ARE CONTROLLED BY
THE LARGEST AND MOST
COMPLEX COMPUTERS
IN THE UNIVERSE!!



BEFORE YOU TAKE OVER THE WORLD, DIABOLICUS, YOU BETTER REALIZE THAT BIG COMPUTER SET UP YOU'RE MISUSING DOESN'T ALWAYS MEAN YOU'RE IN CONTROL!

WHAT?? WHO ARE YOU?

IT'S TRUE THERE ARE CERTAIN JOBS THAT LARGE COMPUTERS DO BEST, BUT THIS LITTLE SILICON CHIP I'M HOLDING IS THE ZILOG Z8000!!

IT'S THE STATE OF THE ART OF MICROPROCESSORS, AND I'M WILLING TO BET IT'LL GIVE YOU A RUN FOR YOUR MONEY!

ZILOG'S THE NAME, AND MICRO-PROCESSING'S MY GAME!

THAT LITTLE THING?? DON'T MAKE ME LAUGH!!

THANKS TO THE ZILOG MICROPROCESSOR'S ADVANTAGE OF SHORT DESIGN TIME, CAPTAIN ZILOG BUILDS A SYSTEM AROUND THE Z8000 AT LIGHTNING SPEED!

TECHNICIANS!! ACTIVATE I/O CHANNELS!! DESTROY THAT BUILD-



A blue-skinned character with a red helmet and a red cape is shown in a dynamic pose, holding a large green object. A large yellow starburst with the sound effect 'ZZZAAAP!' is behind him.

IT'S A FACT OF LIFE, DOC!
THE CLEVER ARCHITECTURE
OF MY Z8000
MAKES ME FASTER ON
THE DRAW, AS THE PROBLEMS
GET TOUGHER!!

ZZZAAAP!



THANKS
TO CAPTAIN
ZILOG!

AND THANKS
TO THE ZILOG
Z8000--AND THE
ENGINEERS WHO
MADE IT
POSSIBLE!

IT'S
GOING
AWAY!

SHORTLY AFTERWARDS,
DIABOLICUS GATHERS
HIS HENCHMEN IN THE
WAR ROOM OF HIS
SATELLITE...

A group of people are gathered around a table in a war room. A large purple alien face is shown in a close-up on the right side of the panel.

THESE EARTHLINGS
ARE MORE CLEVER THAN
I THOUGHT! ESPECIALLY
THIS ZILOG FELLOW!
HE WORKS MAGIC*
WITH A LITTLE SQUARE
OF SILICON!

NO, BOTTLE-
NECK! I'LL
HAVE TO
DEAL WITH
CAPTAIN
ZILOG
MYSELF!!

LEMME AT
'IM, BOSS! I'LL
BOTTLENECK HIS
SYSTEM WHERE
IT'LL REALLY
HURT!

*IT'S NOT MAGIC, READERS! WITH DUAL ENVIRONMENTS, 418 OP CODES, AND ITS UNPARALLELED DEGREE OF REGULAR ARCHITECTURE, THE Z8000 IS THE MOST SOPHISTICATED MICROPROCESSOR AVAILABLE!



LATER...

DO NOT FEAR ME, EARTHINGS! I ONLY WISH TO SPEAK TO CAPTAIN ZILOG!



GIVE UP, CAPTAIN ZILOG! YOU CAN'T POSSIBLY WIN, EVEN WITH YOUR MAGIC CHIP YOU CALL THE Z8000!

STICK IT IN YOUR INDEX REGISTER, DIABOLICUS!



THEN BEHOLD THE WRATH OF...



DIABOLICUS!

IS YOUR EAGER LITTLE Z8000 ABLE TO TELL YOU WHICH OF US IS ME?

IN A BLINK OF AN EYE, CAPTAIN ZILOG CHOOSES THE REAL CULPRIT!

EASY, BORON BREATH! WITH AN ADDRESS SPACE OF EIGHT MEGA-BYTES, THE ZILOG Z8000 MICRO-PROCESSOR IN MY COMPUTER BELT WAS ABLE TO SPOT YOU AMONG THOSE MILLIONS OF FAKES BEFORE YOU COULD SAY, "CUPERTINO, CALIFORNIA"!

ARRESTING ME WON'T SAVE YOU, ZILOG! I'VE JUST MENTALLY INSTRUCTED MY ALLIES—WASTE, INEFFICIENCY, AND OUTMODDED THINKING—TO SABOTAGE THE NERVE CENTERS OF YOUR PUNY CIVILIZATION!

YOUR ENTIRE CITY IS ABOUT TO GRIND TO A PITIFUL HALT! HAHahaha!

AS THE CITY'S PRODUCTION, TRANSPORTATION, AND COMMUNICATIONS SYSTEMS BEGIN TO FALTER, CAPTAIN ZILOG FLASHES FROM MACHINE TO MACHINE, SHOUTING HIS MAGIC WORD, "IMAGINE!", AND EACH IS INSTANTLY CONVERTED TO MICROCOMPUTERIZATION!

WHEN YOU GIVE MACHINES THE POWER TO PROCESS LARGE QUANTITIES OF DATA IN REAL TIME, THEY NOT ONLY RUN MORE EFFICIENTLY, THEY CAN DO THINGS THEY NEVER COULD BEFORE!

ZILOG'S Z8000 MAKES THAT POWER BOTH AFFORDABLE AND USABLE, WHERE OTHER COMPUTERS WOULD BE JUST TOO BIG!!

IMAGINE!



YOU WIN, CAPTAIN ZILOG! THE Z8000 IS TRULY ASTONISHING! I WILL GO AWAY AND NEVER BOTHER YOUR PEOPLE AGAIN!

(AND IF HE'LL BELIEVE THAT...)



HE'S GONE FOR GOOD, CAPTAIN ZILOG!

IS IT TRUE THAT MICRO-PROCESSORS CAN DO ALL THAT YOU SAY?



AND MORE! THE Z8000 COMBINED WITH GOOD OLD IMAGINATION CAN READILY MAKE THE WORLD A BETTER PLACE TO LIVE IN!

LIKE HOW?



THE Z8000 HAS A REGULAR ARCHITECTURE! THAT BIG COMPUTER DESIGN FEATURE AVOIDS THE BOTTLENECKS INHERENT IN TRADITIONAL MICROPROCESSOR DESIGNS!

WITH 418 OP CODES, THE Z8000 PERMITS COMPACT PROGRAMS! THROUGHPUT RIVALS THAT OF LARGE COMPUTERS!



THERE'S 32 BIT OPERATION CAPABILITY BUILT INTO THE Z8000 THAT INCLUDES MULTIPLY AND DIVIDE! THINK OF THE ADDED FLEXIBILITY AND SPEED THAT MAKES POSSIBLE!

AS WE'VE SEEN, THE 8 MEGABYTE MEMORY LETS YOU TACKLE THOSE REALLY BIG JOBS WITH EASE!



TWO OPERATING MODES (SYSTEM AND NORMAL) PROTECT SYSTEM INTEGRITY AND MAKE IT NEARLY IMPOSSIBLE FOR THE USER TO "CRASH" THE OPERATING SYSTEM!

AND ONE OF THE Z8000 PERIPHERALS IS A MEMORY MANAGEMENT UNIT THAT GIVES YOU POWERFUL MEMORY MANAGEMENT AND PROTECTION CAPABILITIES!



MEANWHILE...

EARTH IS OURS FOR THE TAKING! I HAVE A PLAN THAT WILL PUT HUMANITY UNDER MY THUMB FOR ALL ETERNITY!

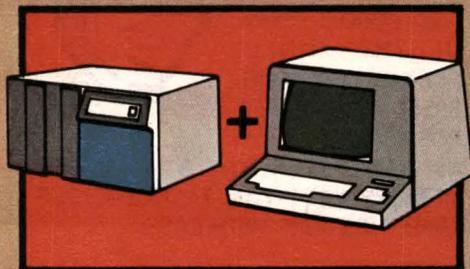
BE SURE TO READ PART TWO IN THIS ISSUE: **Battle Beneath the ARCHITECTURE!**

READERS!

The Z8000 is at your Zilog distributor right now in two versions, the Z8001 with 8 MBytes of direct address at \$139.30* and the Z8002 with 64 KBytes of direct address for only \$107.10*. If that isn't enough to set your imagination going, take a look at these new development systems from Zilog. They'll really give you a chance to set off some fireworks!

SMALL BUT POWERFUL

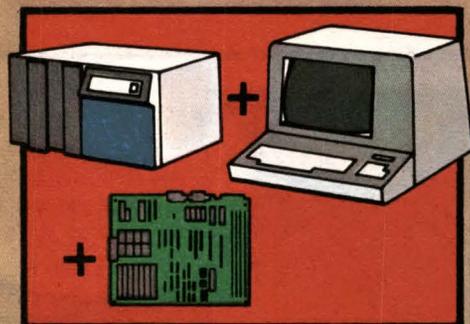
The Zilog PDS 8000 Model 10



A 64 K Byte Microcomputer. CRT. Dual Floppies. 9-slot Card Cage. Power Supplies. Z8000 Software Development Package. Operating System. Editor. Linker. Utilities. \$10,500*

THE NEXT STEP UP

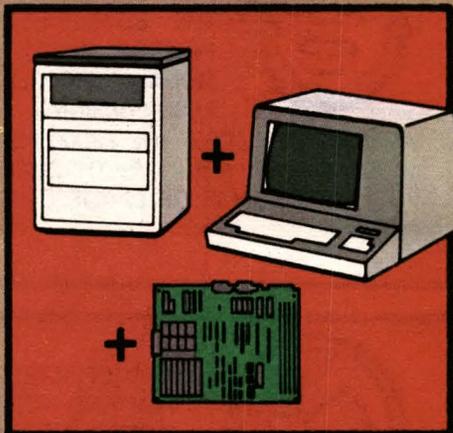
The Zilog PDS 8000 Model 15



Everything in the Model 10 plus a Zilog Z8000 Development Module! Just \$11,995*

FOR THOSE BIG IDEAS

The Zilog PDS 8000 Models 25 and 30



The features of Models 10 and 15 but with 10 megabytes of Hard Disc Drive replacing the Floppies. \$20,000 and \$21,500*

WOW! LOOK AT THIS!

The Zilog Z8000 Development Module

A Z8000-Based computer board with 2K to 8K words of EPROM. 16K to 32K words of Dynamic Ram. Dual Serial Interface. 32 Programmable I/O Lines. Four 8-bit Programmable Counter Timers. Lots of wire wrap area. \$1500*

FOR MORE INFORMATION CALL TOLL FREE!!!

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In California, call (408) 446-4666

*Suggested Retail Price. Domestic U.S. Only. Prices for Z8001 and Z8002 are for quantity 100.

CAPTAIN ZILOG! "BATTLE BENEATH THE ARCHITECTURE!"

IN THE ROYAL CHAMBER OF HIS SATELLITE, DR. DIABOLICUS LAUNCHES A NEW PLAN WITH HIS HENCHMEN—BOTTLENECK, POWER STEALER, CRASHER, SCRAMBLER, SCORCHER, AND KLUGER! IT JUST GOES TO SHOW YOU: YOU CAN'T KEEP A GOOD SCOURGE OF THE UNIVERSE DOWN!!

MY MISTAKE WAS IN ASSUMING THAT CAPTAIN ZILOG IS AT THE BOTTOM OF OUR PROBLEMS!

BUT METHINKS THIS ACCURSED Z8000 IS THE SOURCE OF HIS POWER!

YEAH! DO WE GET TO SHIFT N' ROTATE THAT MICRO MENACE?

SO, WHUT'S THUH PLAN, BOSS?

IN DUE TIME! FIRST OUR MINIATURIZATION SYSTEM MUST SHRINK US DOWN TO MICROSCOPIC SIZE, AND TELEPORT US TO CAPTAIN ZILOG'S COMPUTER!

FROM THERE, WE'LL WEASEL OUR WAY INSIDE THE Z 8000 ARCHITECTURE!!

THEN WE SABOTAGE IT!! SCORCHER! MAN YOUR TORCHES! BOTTLENECK! GATHER YOUR MEN! CRASHER! GET SET FOR SOME FUN! SCRAMBLER! GET SET FOR SOME SILICON SMASHING!!

TAKE NO PRISONERS!!

LATER, IN NICK STACEY'S COMPUTER LAB...

THAT CAPTAIN ZILOG WAS SO WONDERFUL, NICK! WHAT A MAN! YOU SHOULD HAVE BEEN THERE...WHICH REMINDS ME! WHERE WERE YOU?

...ER...I FORGOT SOMETHING I HAD TO DO IN THE LAB!

LITTLE DOES ANNE KNOW THAT I'M CAPTAIN ZILOG!



DANCIN' DATA!! SOMEONE'S TRYING TO SABOTAGE THE GENERAL REGISTERS IN THE Z8000! AND I THINK I KNOW WHO!

WHAT ARE YOU TALKING ABOUT, NICK?

NO TIME TO EXPLAIN! THE...

DING DING DING
DING DING DING

...FIREWORKS... HAVE JUST...

...BEGUN!!!



SOMEONE'S CAUSING TROUBLE INSIDE THE Z8000! WE'LL MINIATURIZE FURTHER AND GO INSIDE!

I DON'T BELIEVE IT! YOU'RE CAPTAIN ZILOG!!

I'LL ERASE ANNE'S MEMORY LATER, SO MY IDENTITY WILL REMAIN A SECRET!





**BYTE-SEEING
TOURS**
BIT, NIBBLE &
WORD STRING
EXCURSIONS

ANNE AND CAPTAIN
ZILOG SUDDENLY FIND
THEMSELVES INSIDE
THE ARCHITECTURE OF
THE Z 8000! THEY
ARE OVERWHELMED
BY ITS INCREDIBLE
VASTNESS...

WE CAN
TAKE ONE OF
THOSE CORRIDORS
TO THE GENERAL
REGISTERS!

WHO ARE THOSE PEOPLE?

WHY, THEY'RE QUEUED UP FOR A Z-BUS, OF COURSE!

MEANWHILE, NEAR THE GENERAL REGISTERS...



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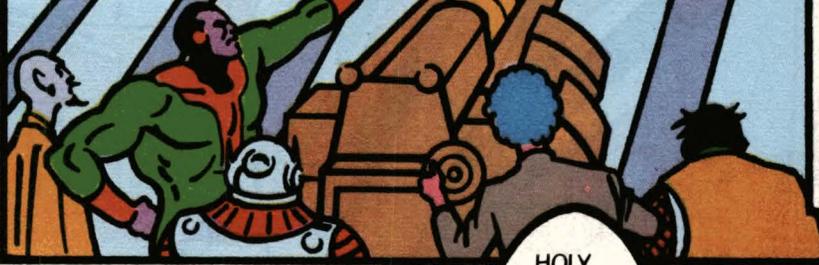
STACK POINTER

ACCUMULATOR

DESTROY THAT STACK POINTER!



SOURCE OPERAND



HOLY COW, BOSS! DIS BABY CAN USE ANY OF ITS REGISTERS AS A STACK POINTER!

NONE OF THE REGISTERS ARE DESIGNATED! THEY'RE ALL GENERAL!

CRASHER MAKES HIS WAY ALONG ONE OF THE Z8000'S THREE INTERRUPT INPUTS...

ZAP

INDEX

STACK POINTER

STACK POINTER

HAHAHA! THIS'LL DISABLE YOUR PRECIOUS Z8000!



CRASHER! ARE YOU READY TO MOVE IN AND CRASH THE PARTY?



READY, BOSS! I'LL GET 'EM FROM BEHIND!

AS CRASHER STEPS ON THE INTERRUPT INPUT CONTACT, HE CAUSES THE INTERRUPT STRUCTURE TO SWITCH TO THE OPERATING SYSTEM!



YOU CAN KISS YOUR MEN GOOD BYE, THANKS TO WHOEVER YOU HAD FOOLING AROUND WITH THE INTERRUPT INPUTS!

WHAT TH' #%*#C??



I WOULDN'T DO THAT IF I WERE YOU, ZILOG!!



C'MON, BOSS! WE CAN ESCAPE WITH THE GIRL TO THE OPERATING SYSTEM, AND DO SOME DAMAGE THERE!!



GIVE UP, BOTTLENECK! BECAUSE OF THE Z8000'S MULTIPLE ADDRESSING MODES, GENERAL PURPOSE REGISTERS, RICH INSTRUCTION SET, ABUNDANT RESOURCES, AND REGULARITY...YOU DON'T STAND A CHANCE!!



WITH ANNE AS HOSTAGE, DR. DIABOLICUS AND BOTTLENECK TRY DOOR AFTER DOOR, ONLY TO FIND...

HUH? NONE OF THESE DOORS HAVE ANY WAY OF BEING OPENED!



THAT'S BECAUSE THE Z8000 HAS PROTECTED DUAL ENVIRONMENT! THERE'S NO WAY FOR A HARDWARE BRAIN LIKE YOURSELF TO TAMPER WITH THE OPERATING SYSTEM!

THIS WAY MEN!



JUST WHAT DO THESE EIGHT-BIT REFUGEES THINK THEY'RE DOING?

HEY!! IS IT MY IMAGINATION, OR ARE WE...

IF YOU HAD ANY IMAGINATION, YOU WOULDN'T BE IN THIS FIX!

.....GROWING!!!



THANKS TO THE VERSATILITY AND LIGHTNING SPEED OF THE Z8000 INSTRUCTION SET, I WAS ABLE TO TELL THESE GUYS TO CANCEL YOUR MINIATURIZATION FIELD IN JUST A FEW, WELL-CHOSEN OP CODES!*

*CAPTAIN ZILOG HAD 418 TO CHOOSE FROM!

YOU'VE BEATEN ME, CAPTAIN ZILOG! THE Z8000 IS SOMETHING I WAS NOT PREPARED TO DEAL WITH! I HAVE OTHER PLANETS TO CONQUER THAT ARE FAR LESS TROUBLE THAN THIS ONE!



WE GOTTA TELEPORT BACK TO THE SATELLITE IMMEDIATELY, BOSS, OR WE'LL BE CRUSHED!







FANS!

**LOOK FOR THESE EXCITING
NEW ADVENTURES OF
CAPTAIN ZILOG COMING
SOON TO YOUR NEAREST
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THE AMAZING MEMORY MANAGEMENT UNIT! THE Z-MMU Dynamic segment allocation and protection.

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For all the details on this exciting and growing family of Z8000 peripherals!!! Or, write: ZILOG, 10460 Bubb Road, Cupertino, CA 95014.



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