Single -chip dedicated video games had peaked in 1976
Fairchild had introduced programmable game - badly timed.
Atari introduced VCS for 1977 market.
Biggest question in industry was whether market would peak in 1977 or 1978.

Concept at Mattel was that home video games should

Have rich graphics

Provide long lasting game play values

No system on the market permitted that kind of software.

My task - Develop hardware for that kind of software.

National had functioning breadboards of a new chip set.

Mattel had had conversations with National.

Mattel introduced first 2 handheld games - football and auto race.
<table>
<thead>
<tr>
<th>CHIP SETS</th>
<th>NATIONAL'S SET</th>
<th>ELEGANT</th>
<th>GENERAL INSTRUMENT'S SET</th>
<th>No Graphics RAM</th>
<th>MOS TECHNOLOGY'S SET</th>
<th>ELEGANT BACKGROUND</th>
<th>No Moving Objects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>$46.00</td>
<td>$25.00</td>
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<td>$25.00</td>
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<td>Description</td>
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</tbody>
</table>
BY LATE AUGUST, WE HAD

TALKED NATIONAL DOWN TO SIMPLER CHIP SET FOR $33,00
TALKED GI UP TO ACCEPTABLE SET FOR $30,00

WE DECIDED TO GO WITH NATIONAL

"HANDSHAKE" MEETING BECAME "SCARE MATTEL INTO POSTPONING PROJECT" MEETING

ALL MATTEL WORK ON VIDEO GAMES WAS ORDERED SHUT DOWN.

RAY WAGNER AGREED TO RECONSIDER WHEN WE GOT AN AWAITED REPORT FROM GI.

TWO MONTHS LATER

GI REPORT WAS PRESENTED
PROJECT WAS REVIEWED
PROJECT WAS RE'INSTATED - USING GI CHIP SET
HAD SELECTED SYLVANIA TO MANUFACTURE MASTER COMPONENT.  
WAS APPARENT CHIP SET WOULD NOT MAKE '78 CHRISTMAS MARKET.

TI OFFERED TO DESCRIBE THEIR CHIP SET.  
GI AND TI SETS WERE DIFFERENT BUT ROUGHLY EQUIVALENT.  
STIC AND 9918 BOTH IN FIRST SILICON THAT WEEK.

TI BELIEVED IN NEED FOR SYSTEM STANDARDIZATION AS DID WE.  
TI WAS DEVELOPING COMPUTER (99/4)  
MILTON BRADLEY WAS DEVELOPING COMPATIBLE VIDEO GAME.  
JOINING FORCES WAS STRONGLY CONSIDERED.

BUT WE WALKED AWAY  
TI SYSTEM ARCHITECTURE NOT ACCEPTABLE TO MATTEL.  
TI WAS UNWILLING TO MODIFY ARCHITECTURE.
Electronics had become a division of the Toy Division –
Marketing and engineering only.

Handhelds games were going strong.

Very small Intellivision staff,
- 3 Electrical engineers plus 3 or 4 at GI,
- 1-2 Mechanical design engineers,
- 1 Software engineer plus 3 or 4 at APH,
- 1 Purchaser (part-time)
- Misc, support people (perhaps 6-8)
Manufacturing by Sylvania.

Still no STIC or RAM Chips
TO THE MARKET PLACE

Dec. 3, 1979
Roll out to test market in Fresno
Product delivered in rented truck (along with 10,000 fortune cookies)
Response was great - even after Christmas

August 1980
National distribution started

December 1980
Product not moving - people don't know about Intellevision
Enter George Plimpton
Sales turned around immediately

Intellevision finally was a reality in the market place.
Hardware designed for software, not vice versa

Designed for the home environment - not arcades or business

Video games (entertainment) will always be the heart of home systems but are dead ended as a stand alone product.

Video games provide best base for home computers

Friendly, non threatening
Really are computers of a limited class,

Modular architecture permits upgrade to computer

Master component was configured for expansion but no cost for this was permitted.

Home computer is not a hobbist or business computer

For non-computer people - the whole family.
Should not require knowledge or use of computer language.
Preprogrammed software will be used predominantly.
Convenient, fully computer controlled mass storage is essential.
Mass audio storage is important for friendly interface and many applications.

Memory should be architected around game play, not video game

Data flowing into home (videtex) is a major part of the near term future home

Video games, properly interfaced, provide the best means of bringing VODOTEX into the home.

Mattel has been (maybe still is) in a unique position to make the home revolution happen in a valid way.
THE KEYBOARD COMPONENT PROGRAM

Concept - Expand master component into valid home computer.

Primarily for non-computer people
Pre programmed software primarily
Optional basic cartridge for those who do want to write programs.

Built-in storage medium to make it a valid computer.
Cassette was only economically viable medium.
Start-stop only audio cassette unacceptable.
   Too slow
   Too cumbersome
   Too unreliable

Developed fully computer controlled drive
High speed search to records
High speed data transfer
Error detection and correction
Audio as well as digital tracks

16K deciles of memory
40 x 24 alphanumeric display capability
KEYBOARD COMPONENT MILESTONES

January, 1979 - Under pressure of customers, decided to accelerate development of keyboard component - objective: home units available by Christmas, 1979, even though they would be expensive.

August, 1979 - First breadboard entered into Sears market research program against Atari and APF - ours worked fine - both of the others had hardware problems but worked.

December, 1979 - Had production design working units, but had decided on a significant internal architectural change.

September, 1980 - Test market in Fresno - with no available software. (Basic was available a few days later).

First half, 1981 - Struggles to develop production procedures at Technicolor

Fall, 1981 - First markets opened in Seattle and New Orleans - still almost no significant software.

June, 1982 - Finally organized for a valid emphasis on software development.

August, 1982 - Terminated the program.