

CONFIDENTIAL

TANK

Review #2.0
Thursday, July 1, 1993

Testers!

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Gary Stark

1) startup

~~2) Controls~~

~~— Digital~~

~~— Height~~

3) Quad audio

~~4) Drones~~

4) Timed

MEETING AGENDA

2:00-2:15	VIEW GAME IN LAB
2:15-2:30	SUMMARY OF PROGRESS TO DATE
2:30-3:30	QUESTIONS & ANSWERS
3:30-4:00	FREE FORMAT (BRAINSTORMING ALLOWED)

PROGRESS TO DATE:

The primary objective of this review was to demonstrate representative gameplay by providing the first true wave (non-linked). Although minimal time was given to 'tuning', the first wave is in and playable. This first wave has both fast action sections and slow sections. With appropriate tuning, much more of the wave could be fast paced.

Specifically, the stated goals for this review were as follows...

implement one complete wave	- As stated above, this goal was met.
conversion from GX2 to GT	- Accomplished.
preliminary CAGE audio	- Accomplished.
fully impl. 1 goodguy tank, incl. weap.	- this goal only partially met.
fully implement one control panel	- goal partially met (another iteration planned).
3+ badguy tanks implemented	- Accomplished.
enemy structures (1 radar, 1 bldg, 1 tur.)	- This goal greatly exceeded.
impl. 'contained' worlds (+ world editor)	- Accomplished.
three rocks in final graphic form	- This goal partially met.
cabinet design finalized	- This goal NOT met due to ID scheduling.

In summary, we are on schedule.

OBSTACLES:

1) Barely enough CPU muscle: Although we've eliminated most of the frame overruns, it's still the 'ugly monster' just around the corner. Networking is an unknown. An even bigger challenge will be converting to POLKA. POLKA requires more of the game CPU than our current growth hardwares. If we're lucky, there will be tradeoffs (doing the ground/cliffs might become easier, etc). PLEASE NOTE: the time required to convert to a new hardware is not allocated in the current schedule. We will revisit this issue at the next review.

SCHEDULE

- 1st REVIEW:** APRIL 1, 1993
GOAL: **emulate Battlezone in functionality**
demonstrate graphic look (less translucency effects)
prototype GT
present cabinet design proposal
storyboards for Attract, Coin-up, & Segues
- 2nd REVIEW:** JULY 1, 1993
GOAL: **implement one complete wave**
conversion from GX2 to GT
preliminary CAGE audio
fully implement one goodguy tank, incl. weaponry
fully implement one control panel
3+ badguy tanks implemented
enemy structures (1 radar dish, 1 bldg, 1 turret)
implement 'contained' worlds (including world editor)
three rocks in final graphic form
- 3rd REVIEW:** OCT 1, 1993
GOAL: **implement networking - FOCUS GAME**
layout of subsequent waves
cabinet design finalized, prototype cabinet constructed
implement remaining badguy tanks, incl. weaponry
implement remaining two control panels
implement remaining enemy structures
final weapon effect graphics
- 4th REVIEW:** JAN 1, 1994
GOAL: **begin long term field testing**
Attract, Coin-up, & segues implemented
Finale implemented
remaining FX implemented (force fields, infrared view, missile POV, etc)
OS (including stats) completed
- GRAPHIC RELEASE:** MAR 1, 1994
- PROGRAM RELEASE** MAY 27, 1994
GOAL: **game completed**
all tuning completed
security implemented

COST ESTIMATE - DOUBLE SITDOWN

Description	Unit Cost	Total
ELECTRONICS		
GT PCB (includes security)	2 x 435.30	870.60
JAMMA filter PCB (if needed)	2 x 10.39	20.78
COMM PCB	2 x 30.00	60.00
CAGE PCB	2 x 92.00	184.00
		1135.38

ROMS		
Program: 1M-100nS	4 x 2.60	10.40
MOB: 4M-100nS	16 x 8.50	136.00
PF: 4M-100nS	2 x 8.50	17.00
Alpha: 1M-150nS	1 x 2.60	2.60
Audio: 4M-100 nS	3 x 8.50	25.50
	subt	191.50
Two sets needed	2 x	383.00

Masked ROM's Calculation	
	10.40
8 x 7.50	60.00
1 x 7.50	7.50
	2.60
3 x 7.50	22.50
	subt
	103.00
2 x	206.00
Masked Roms one-time cost:	
	\$54,000
Number of units to breakeven:	
	305

ELECTRICAL		
Power Supply		92.00
Power Distribution PCB		18.58
Display (Wells, 25")	2 x 318.00	636.00
JAMMA Filter PCBs	2 x 11.50	23.00
PCB ground plane and hat assy.		40.00
AC/DC Power and video harness		50.00
IEC 3xxx cord/switch/fuse module		15.00
Control harness		24.00
		898.58

COIN SYSTEM		
Coin door, coin counter, cash box & coin box encl. (4 w	1 x 87.64	87.64

CABINET		
Wood, cabinet + attract panel		200.00
Plastic seats (2)		100.00
Seat pedestals		24.00
Vendor Kit (casters, glide plates, fan grill, locks, side decals)		60.00
Wood cabinet seat		150.00
Shield	2 x 7.00	14.00
Speakers (4-4", 2-8") + Grilles	6 x 7.50	45.00
Fluorescent light		12.00
Formed dash, monitor bezel, or attr	2 x 50.00	100.00
		705.00

CONTROL PANEL ASSEMBLY		
Control Panel w/ Hinge		21.00
Decal		7.00
Throttle controllers	2 x 33.00	66.00
Button assemblies	5 x 1.00	5.00
Draw latches	4 x 1.25	5.00
		104.00
Two assys needed	2 x 104.00	208.00

OTHER		
Shipping Container		128.00
Labels, manuals, bags, &c.		5.65
Misc. Hardware		10.00
Reserve for Missing Parts		10.00
		153.65

TOTAL MATERIALS COST 3571.25

3394.25

LABOR		
PCB (GT, COMM, CAGE)	4.1 x 8.57	35.14
Sub and Final Labor	4.5 x 5.89	26.51
SUBTOTAL		61.64
Overhead (material+labor) x 21%		762.91

w/ Masked Roms

FULLY ABSORBED COST: \$4,396

\$4,182

DISTRIBUTOR COST AT MARGIN OF:

35%	\$6,763
40%	\$7,326
45%	\$7,992

\$6,433
\$6,969
\$7,603

