

Designer's

NOTES

AN INFORMAL HISTORY OF THE DEVELOPMENT OF PANZERBLITZ

Imaginative



BY
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THE FOLLOWING article is a history of the development of the game PanzerBlitz, starting back in the late 1960s. My source material stems from many period gaming magazines from the late Sixties to the early Seventies. A few, like *The General* Vol. 7, No. 3 and *Strategy & Tactics* No. 22, have offered great designer's notes and *D-Elim* Vol. 2, No. 11 even printed a genealogy of the successive game designs that led to PanzerBlitz. Many others only offered little tidbits of information, usually in their respective gaming news sections which, when taken individually, say very little, but when taken all together, really round out the information supplied by the other major articles.

HIGHWAY 61

IT IS GENERALLY AGREED that the first design that led to PanzerBlitz was a test game called Highway 61. In early 1968, James Dunnigan was riding high on the popularity of his Jutland game that had been released the year before by Avalon Hill. In that game he successfully converted naval miniatures to a semi-boardgame state. Having done that, he decided to see if he could do it again, this time with ar-

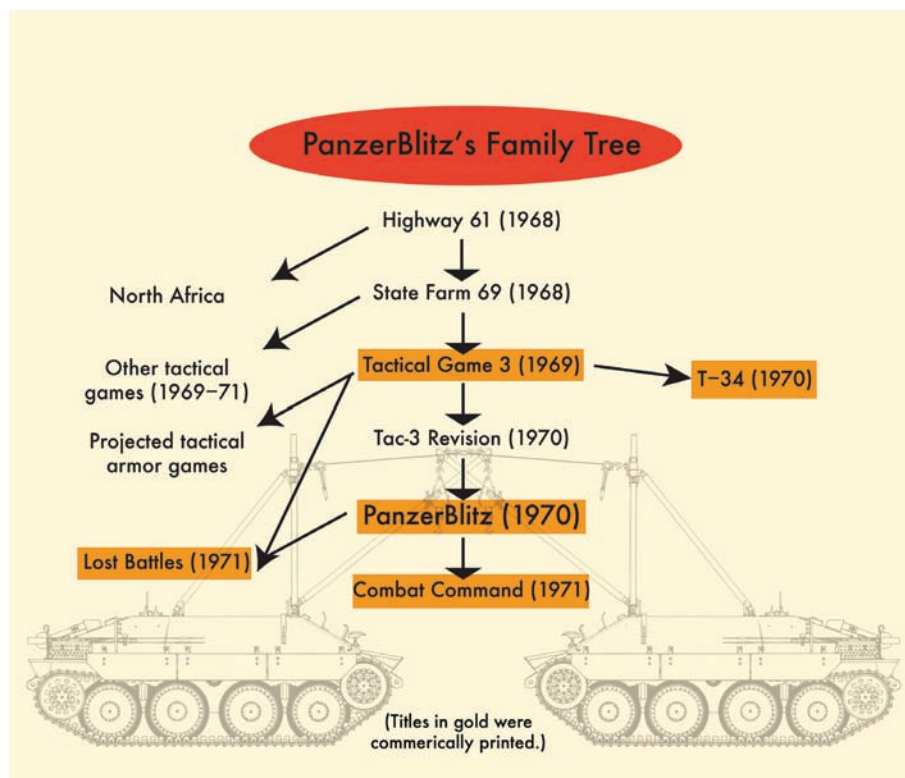
mored fighting vehicles. Indeed, it had been something he had wanted to do for a few years but, at that time, collecting hard data on AFVs and their guns was a difficult thing to do. Hard data just was not very available and he had to rely on information gleaned from the various armor miniature rules that were in existence at the time, such as *Schwerpunkt* and the recently released *Angriff*.

From these he devised a simple little game which he eventually called Highway 61. Here, each player was provided with a number of large 1 by 2 inch counters of different types of AFVs. The time period was 1944, using the available tanks of the time. As the setting was the Eastern Front, these AFVs were German and Russian. For the Germans

he used PZ IVHs, Panthers, Tigers (both IS and IIS), Nashorns, SG IIIGs, and halftracks. For the Russians he used T-34cs, T-34/85s, SU-76s, SU-85s, JSU-122s, JS-IIS, and Lend-Lease Shermans and halftracks. Each counter contained a top view of the vehicle in question, its name or designation, the Movement Factor on the upper area of the counter, and three numbers along the side, giving the maximum armor thickness of the front, side, and rear of the vehicle. There was no infantry or artillery, just AFVs, at first.

Play was simple. There was no board. Highway 61 was played on the floor or a very large table, just like Jutland. The game turn had two phases: movement and fire. During the movement phase the players would first write down the planned movement of their counters on a piece of paper and then all players would move their units simultaneously, following the directions of their orders. The MF number on the counter was the number of inches it could move in a turn. It cost one inch of movement to turn up to 90 degrees and two inches of movement to turn from 91 to 180 degrees. Physically, the counters were moved using a straightedge ruler. Movement was voluntary; a player could move some, all, or none of his





counters as he pleased. In the firing phase, players would determine the range between their counters and their intended targets using a yard stick or a tape measure. Vehicles with turrets could fire in any direction, while vehicles with hull-mounted guns could only fire in the forward arc radiating from the front side of the counter. Players would then consult the firing tables provided in the game. Each table was for a certain type of gun carried by the AFVs, thus more than one vehicle could use the same table. They were divided into four columns: the first was for the range in inches between the firing unit and the target; the second was the dice roll to see if the firing unit hit without having moved in the previous movement phase; the third was the dice roll to see if the firing unit hit and had moved in the previous movement phase; and fourth was the armor penetration at the given range. The

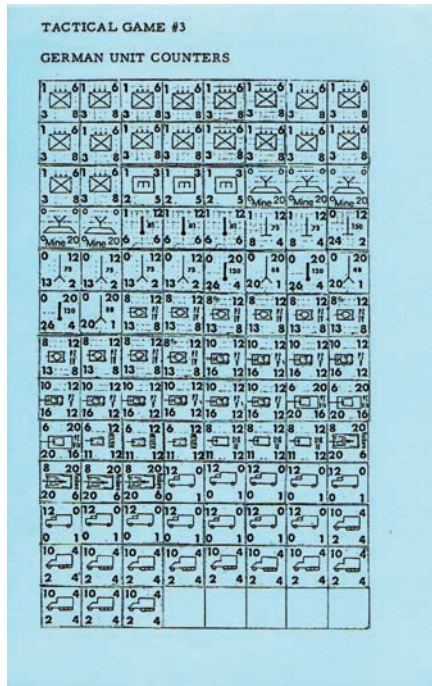
players would first roll to see if they hit the target vehicles. Those that did would go to penetration column to see if they pierced the target vehicle's armor or not, depending on where it was hit (front, side, or rear). If the tank was penetrated, it was flipped over to its other side to signify that it was a wreck. Otherwise the tank was still in the game. Line of sight/fire was very simple as there was no terrain; vehicles and wrecks were the only things that could block LOS/LOF. Visibility was unlimited; the guns could all reach the maximum ranges on their respective firing charts.

The game proved popular among the playtest crowd at Poultron Press; in fact, several of them brought woods and buildings from regular miniatures tables in an effort to introduce terrain into the system, but all they proved to be were places to hide behind. One early complaint concerned the halftracks, the ma-

chine guns on which could not penetrate any tank: they thus became mere targets. Dunnigan solved that problem by giving them anti-tank guns to transport. The guns were on one inch square counters with a top view of the gun in question and the gun caliber printed in millimeters. The Russians got the 76.2mm gun and the Germans received the 75mm and a few 88mm guns as well. Simple rules for transporting and loading/unloading were devised. The anti-tank guns fired in the same direction as the assault guns with the 88mm being able to fire in all directions by virtue of its anti-aircraft mounting. In this state, the game proved to be so popular that Dunnigan started to devise a version of it for the North African theatre, but no hard copy was ever made for play testing.

STATE FARM 69

IN THE EARLY SUMMER OF 1968 one of the playtesters, Edi Birsan, made a boardgame version of Highway 61. He presented it to James Dunnigan who, as was his wont, polished it up a bit and gave it a new title: State Farm 69. Because the game was played on a hexboard, terrain could now be fully added, which entailed the formulation of new sighting rules. The counters were shrunk down to one-half inch size with the same pictures and values on them as previously. The firing charts were easy to convert by merely changing the distance in inches to hexes. The movement factors on the counters did not change but now became movement points with each type of terrain hex requiring a certain number of them to enter. As playtesting continued through the summer,



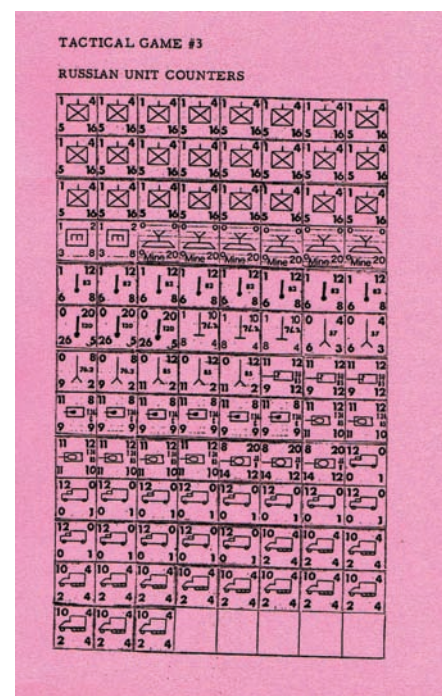
more features were added to the game. Infantry appeared in squads and, of course, a whole set of new rules and firing tables to accompany them. By the fall artillery was introduced, first as on-board counters with more anti-tank guns, infantry guns, and mortars, then later in the form of off-board units for the bigger artillery pieces. That same Autumn more rules came into into play, such as minefields, fortifications, weather, morale, and command and control, to name a few. Dozens of vehicles were added to reflect the different time periods on the Eastern Front. By the end of the year the playtest rulebook had become several inches thick and the game had become excessively realistic to the point that it was almost impossible to play. In many ways State Farm 69 was the Advanced Squad Leader of its day, the difference being that advances in game design made ASL was playable in when it came out in 1985, whereas in 1968 State Farm 69 was not. It was never published beyond a few playtest copies.

It is interesting to note that several aspects of State Farm 69 had a lasting effect in the future designs of tactical games in the series. For example, units that were in covering terrain, or out of the LOS if in open terrain, were not placed on the board until they were spotted. In open terrain that was easy: if the unit was within the maximum sighting distance it was automatically seen and placed on the board. Units in covering terrain (woods and buildings) had to be spotted. Spotting occurred either if you had a friendly unit in a hex adjacent to the hidden unit, or if the hidden unit fired. Spotting was automatic when adjacent, whereas spotting a firing unit was based on the results from a spotting table: the farther away the spotting units were, the less chance they had of seeing the firing unit by its muzzle flashes. The chances of spotting were based on a sliding scale and by the time you got out to a real life distance of 500 meters, the chances were already less than 50 per cent. This would have an impact on the spotting rules of PanzerBlitz later on.

Another interesting feature was the devastating firepower of the off-board artillery. The indirect fire rules were extensive, but it was the effects of scoring a hit in the target hex that was so devastating: artillery of the 105mm variety had a two-thirds chance of killing the unit in the hex, artillery of the 120mm variety had a five-sixths chance, and artillery of the 150mm variety had an automatic kill on their effects tables. Of course die roll modifiers for terrain and fortifications in the target hex could alter the results to no effect, even with a 150mm piece. The results were based on the bursting ra-

dius of the round in question (each artillery unit would fire one round per attack) and the odds of the said unit being within that radius. The area in the hexes was quite small and only one unit — be it vehicle, gun, or infantry squad — could be in a hex at a time (there was no stacking). The combat results in the game were still either “no effect” or “destroyed.” Even armored vehicles could be killed, based on the premise that a round that either scored a direct hit (a rarity) or that landed nearby (most likely), would damage the tank enough to get a mobility kill and thus take it out of the game. Of course artillery of a lesser caliber (mostly the on-board artillery units) had less of a chance of scoring a kill. All this would have a profound effect when Dunnigan would figure out the attack factors of the big artillery units in PanzerBlitz that we now know so well.

Yet another interesting feature was Dunnigan’s attempt at Command and Control. Each player had to assign his units to “task forces” of





up to six units each (these were essentially platoons as players tended to assign the same type of units to each group). Each task force was assigned an order (Move, Direct Fire, Indirect Fire, etc.), which it then had to perform for a period of six turns. During that time the players could not change the orders that they had given to their groups, which had to carry them out regardless of what happened elsewhere in the game. At the end of the six-turn period, players could assign new orders to their groups for the next six turns.

During subsequent revisions of the game, the German players were given the option of changing the orders for any or all of their task forces if they passed an initiative check on yet another of the innumerable charts. For the last revision of the game, this whole Command and Control procedure was dropped as it had become too cumbersome and slowed play to a crawl. However, Dunnigan saved and modified the procedure and it would be seen again in the Simultaneous Movement Tactical Games introduced by SPI in the mid-Seventies.

State Farm 69 proved to be even more popular with the playtesters at Poultron Press than Highway 61, even if it did eventually become unplayable. It was modified several times, although all of its versions tended to be rather similar to one another. It should be noted that in the last version, Dunnigan gave the counters attack, range, and defense factors in order to do away with the

need for firing charts. While not altogether successful, this would prove to be a step in the right direction and it can be said that this innovation gave birth to the now-famous “Dunnigan System” of counter value determination. While State Farm 69 wasn’t really playable, it did show that tactical level combat could be simulated in a board game and from this system came the Tactical Game Series in 1969, in which Dunnigan started a whole new series of experimental land games to cover different periods throughout history. These were certainly successful: Tactical Game 10 became Grenadier; Tactical Game 11 led to Grunt; Tactical Game 13 became Centurion; Tactical Game 14 became Renaissance of Infantry; Tactical Game 16 became Dark Ages; Tactical Game 18 became Phalanx; Tactical Game 19 eventually led to Soldiers; and last, but not least, good old Tactical Game 3 became PanzerBlitz.



TACTICAL GAME 3

AT THE BEGINNING OF 1969, Dunnigan started on a redesign of State Farm 69. He decided that the tactical level of single vehicles, squads, and artillery pieces was too complex to be put into a playable format in a boardgame, so he raised the level to platoon-size elements, seeing as the platoon was the basic tactical unit in Western armies. However,

for the Russians he had to go to the company level as this was the basic tactical unit in their army. To accommodate units of these sizes, the scale of the board would have to increase. He chose a scale of 250 meters per hex. The board could now have small towns in hexes instead of individual buildings, forests instead of small clumps of trees, and hills would occupy a smaller area on the board, greatly easing line of sight complications. Also with hexes of this size, multiple platoons and even companies could fit into them and thus stacking was introduced into the game.

It was at this time that the Dunnigan system of determining counter values developed fully, largely through trial and error. For example, Dunnigan first based his anti-armor values on the penetration values of APCBC rounds at 1,000 meters, but quickly found that this did not work for smaller guns whose penetration values were too low at that range. Given that the majority of the armor battles occurred at 500 meters or less during the war, he lowered the determination range to that distance. This brought the AF of the smaller guns up to a more acceptable level while the bigger guns did not increase that much. The range factors were based on the maximum ranges of the penetration tables that he was using, which is why the tanks and anti-tank guns had a longer range factor than they do in PanzerBlitz. The defense factor was based on the maximum armor thickness of the vehicle in question



and the movement factor was simply the maximum speed of the vehicle divided by three. The counters started to show the more familiar “Z” pattern of the factors but with the factors in different positions than what would be customary later on. The vehicle picture was a crude drawing of the top view of the tanks or tank destroyers or a side view of the transportation vehicles.

The rules, while very simple, were ambiguous in some places and contradictory in others. The turn sequence was also simple: the Russians moved their units, then both sides fired, removing destroyed vehicles at the end of the phase; then the Germans moved their units, and both sides fired again, removing destroyed units at the end of the phase. Infantry was represented by rifle and engineer unit-counters. Artillery units were also represented, but only the on-board variety (mortars, AT guns, infantry guns) from State Farm 69; there was no off-board artillery. The factors for infantry and artillery were there but the attack and defense factors for mortars and field guns tended to be more powerful than they would be in their final form in PanzerBlitz. Line of sight and visibility rules were virtually non-existent: you could see *into* a covering terrain (town and woods) hex but not *through* it. The combat results table still only had two results: No Effect or Destroyed. The Overrun attack made its first appearance in a crude form. There were six hypothetical situations provided in the game.

There were many faults with Tactical Game 3 but it must be remembered that it was not an end product but rather a test bed for further development. It proved to be popular

as was seen in its initial sales. After its release in the summer of 1969, it sold over 200 copies to outside buyers, besides the copies that went to the playtesters. And Avalon Hill, always with an eye open for a good selling title, kept a more than casual watch on the development of the game.



REVISED TACTICAL GAME 3

BY THE SPRING OF 1970 Dunnigan had received enough feedback on Tactical Game 3 to see where the bugs in the game were and he began to work them out. About this time the Dispersed and Double Dispersed results appeared on the CRT and the criteria worked out as to what each result represented in real life. The Close Assault attack also made its appearance about this time. The Dunnigan System continued to evolve as modifiers began to appear which altered the attack and defense factors of a lot of vehicles to account for the overall tactics that a unit used. The range factor of most units with anti-tank guns was reduced to reflect their maximum effective ranges, which were usually less than the maximum ranges listed on the penetration charts. The attack factors of the on-board artillery were refigured and frequently were substantially reduced to reflect additional factors not previously considered before. The off-board artillery of State Farm 69 was finally introduced in counter form. Weapons classes were at last established

for the different main weapons of the various types of units. The evolution of the game system was continuing.

As mentioned previously, Avalon Hill was keeping an eye on the development process. They had just released the game *Kriegspiel* in the spring of 1970 and were looking for a game for their fall release before Christmas. While they had several candidates such as *Luftwaffe* and *Origins of World War Two*, they wanted to delay those for another year; they wanted a sure seller in the fall as *Kriegspiel* was not selling all that well. Representatives from Avalon Hill approached the people at Poultron Press, now renamed SPI (Simulations Publications Inc.), at the 1970 Stationary Show in New York and negotiated a deal whereby SPI would develop the game to Avalon Hill's specifications, turning it over to them when they were finished, with a September 1970 deadline. SPI needed the money, as they had recently purchased the magazine *Strategy & Tactics*. While buying the magazine was a bargain (it only cost them one dollar), putting it out was another matter.

During the summer of 1970 the development of the game system followed two lines. The first was PanzerBlitz, which was a simplified version of the revised Tactical Game 3 system. The biggest difference between them was that in the former, a unit could only fire once in a turn, whereas in the latter, a unit could fire several times. This made the TAC 3 situations very bloody; the standard 10-turn scenario rarely lasted past Turn 6. Avalon Hill wanted this part toned down so that a situation could last the duration of the turns allotted to it. The other line of

development would become Tactical Game I, which was their Western Front version of the system.

The revised rules and counters were largely done by the summer of 1970, so emphasis was placed on the development of new scenarios. However, to give players a taste of what was to come in the new PanzerBlitz game, a small version was inserted in *Strategy & Tactics* magazine No. 22 in the summer of 1970. The rules were close to their final form (only a few rough spots were left to smooth out and blocks had yet to be added to the game) and the counters were largely done too (enough were supplied to play a simple scenario on the game map in the magazine). At first a single big gameboard was considered but with multiple scenarios it was decided that it would be better to go with geomorphic gameboards which can be set up in a multitude of ways. Work on the scenarios was headed up by Robert Champer; Redmond Simonsen did all of the artwork for the game. By September of 1970 the game was finished and turned over to Avalon Hill.

PANZERBLITZ

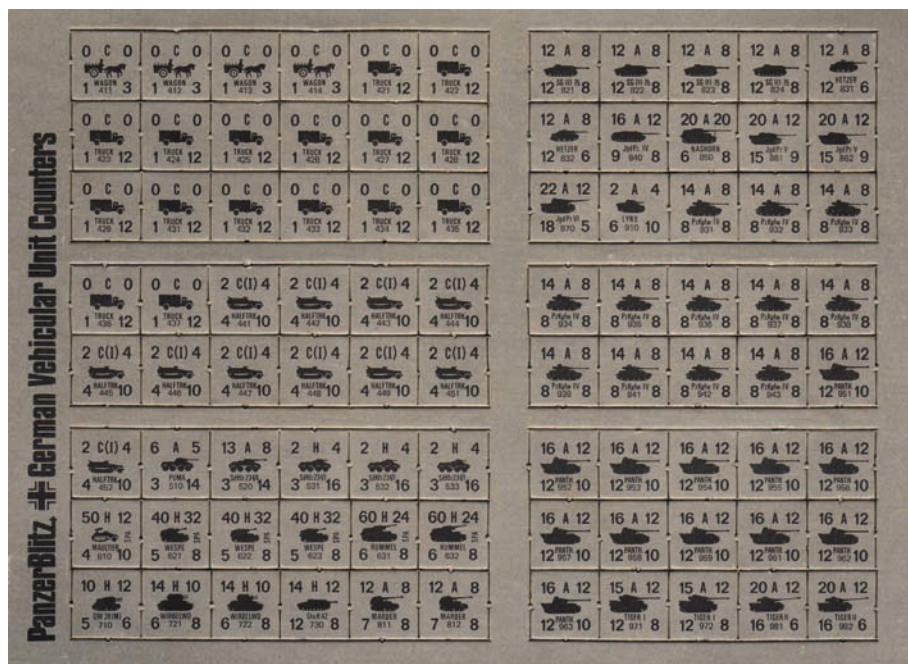
As is well known, PanzerBlitz was published in October of 1970. Within months of its release, Avalon Hill was being flooded with rules questions and complaints about unbalanced scenarios. To handle the rules questions, Avalon Hill used its own game experts to answer them in the Question Box in *The General* Magazine. Some of these answers, however, were at odds with the interpretations by the people at SPI who originally worked on the game. The two main points of conten-

tion were the ability of Command Posts to perform their indirect fire function while mounted and the question of whether a transport unit with movement points left over after unloading its passenger might continue moving. Avalon Hill's answers were that a CP may not perform its indirect fire function while mounted in a transport unit and that transport units may continue moving after dropping off a passenger unit if they have movement points left over. SPI's interpretations, however, were that a CP may employ its indirect fire function while mounted, providing the transport unit does not move on the turn that it is doing so, and that transport units may not move any further after their passengers have dismounted.

SPI argued that since they were the original designers of the game, they had the sole right to answer any game questions; Avalon Hill countered by saying that since they had bought the game, rule decisions were theirs to make. This caused considerable rancor between

the two companies, but it was soon smoothed over when Avalon Hill asked SPI to correct the faults in the PanzerBlitz scenarios, acknowledging that they were in a better position to fix what they had designed in the first place.

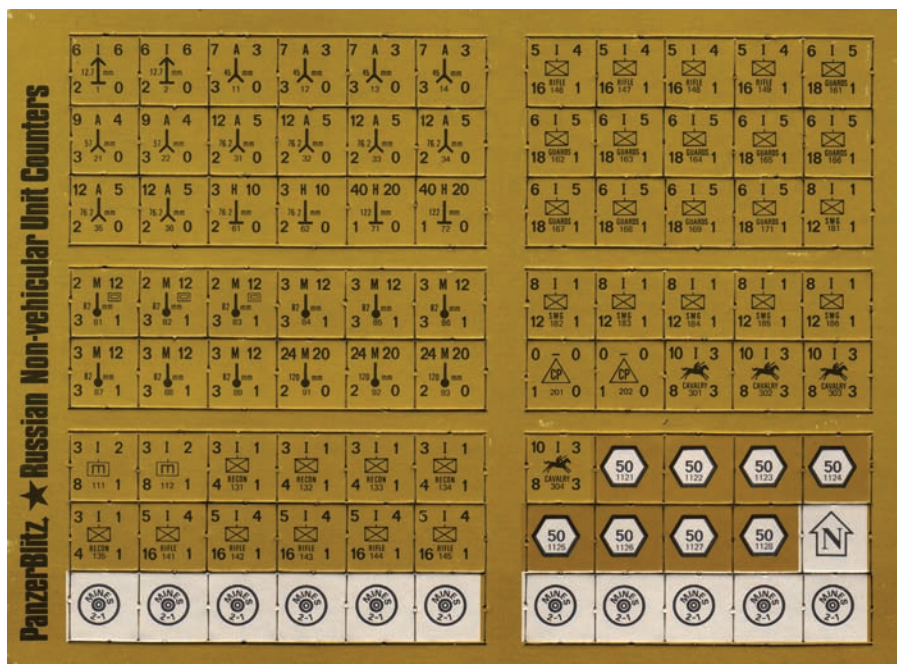
There were problems in seven of the twelve scenarios. In four of them (Situations 1, 9, 10, and 12) there were typo errors and four of the scenarios were unbalanced in favor of one side either because of the set up instructions (Situations 1, 3, and 6) or because of the victory conditions (Situation 10). In yet another scenario, neither side could win because both players would inevitably spend the whole game jockeying for position in middle of the board and waiting for the other side to attack, thus there was little or no combat and the game would usually end up in a draw (Situation 7). Dunnigan looked at the situations in question and came up with a list of corrections which he sent back to Avalon Hill. For the most part Avalon Hill followed these but in a few of the scenarios added corrections of their



own. Again this caused some friction between the two companies, which only cooled down when Avalon Hill bought another SPI title, France 1940, which they published in the spring of 1972.

One might wonder how, if a company spent an entire summer designing scenarios for a game, there would still be flaws in them once the game was published. To answer this, one must realize that playtesters usually run a given scenario to see if the operation that is being simulated can indeed be carried out during the course of the scenario. They are not looking for any game-winning strategies. A case in point is Situation 6. In the original version, the Germans had six mines and eight blocks. During the playtesting, the German players would use the blocks on the road through Boards 1 and 2 and use the mines in their final stand position on Board 2, which would be the appropriate use of mines and blocks in a delaying action. However, once the game was published, gamers looking for the game winning strategy in the scenario quickly found that the mines and blocks set up in a line across a clear area on Board 2 became a line that the Russians simply could not crack, and thus, they had no chance of winning the scenario. In answer to this Dunnigan removed the blocks and mines from the German order of battle and, lo and behold, the scenario became one of the most balanced situations in the PanzerBlitz game.

In September of 1971 Avalon Hill started its second print run of PanzerBlitz, which included the corrected scenario cards. Even then, there were still a few errors in two Situations (1 and 7) that cropped up



within a few months but Avalon Hill deftly handled these in their Q&A Boxes in *The General* magazine. From there Avalon Hill went on to sell over 250,000 copies of the game in 28 years.

THE OFFSHOOTS

THERE WERE TWO OFFSHOOTS from the Tactical Game 3/PanzerBlitz system that were produced by SPI. Their relation to PanzerBlitz is rather tenuous in that they are not direct evolutionary descendants of the game but instead, being side ventures, are based on the general theme.

The first one was T-34, which was published in issue 23 of *Strategy & Tactics* in 1970. It was a miniatures game based more on Tactical Game 3 than PanzerBlitz. It was created by Arnold Hendricks and was done to settle the debate on whether tactical boardgames and miniatures were the same or not. The game had a simple set of rules, a single page of tables showing the firing and

defense strengths of various units, along with a combat results table (which was based on the one from Tac-3), and two colored sheets of cut-out paper stands representing infantry, anti-tank guns, mortars, tanks, tank destroyers, and half-tracks. The stands were for players to try out the system without having to buy miniatures. The game was not popular as players who were already into miniatures thought of it as too basic and players who were into boardgames really were not interested in miniatures. It is unknown if the game caused anyone to go from one game form to the other. It remains to this day a curiosity piece.

The other offshoot was Tactical Game 103, *Lost Battles*, which was published in issue 28 of *Strategy & Tactics*. This was an operational level game and one might wonder what relationship it had with PanzerBlitz. Well, Dunnigan wanted to take some of the basic precepts of PanzerBlitz and put them into an operational level game. This included

scenarios for specific types of operations, generic counters representing a type of battalion, regiment, or brigade, and ranged combat, at least for the field artillery units. The game included a mounted counter sheet and a mapsheet with the scenarios printed on it. The game might have been successful if some more developmental work had been done on it, but alas this was not to be. Some of the counters were missing their road movement numbers and SPI never bothered to explain what these were supposed to be. The counters were not numbered, thus making play-by-mail next to impossible. The different rules in the game did not mesh well together and two of the six scenarios that the game was supposed to have were missing (these were later published in another independent magazine). One principal aspect Dunnigan missed was that, at the tactical level, generic counters representing the different platoons and companies work well for building up higher level formations, but at the operational level the battalions, regiments, and brigades take on their own individual unit identities. While the scenarios only represented specific operational problems and not any specific battles, players found them dull and unexciting. The game was a failure but Dunnigan did not seem to mind as it was only an experiment that made it into a magazine. After this he would only make operational games based on real battles, not hypothetical situations.

THE AFTERMATH

PANZERBLITZ spawned many evolutionary lines of game development in tactical armored warfare. To de-

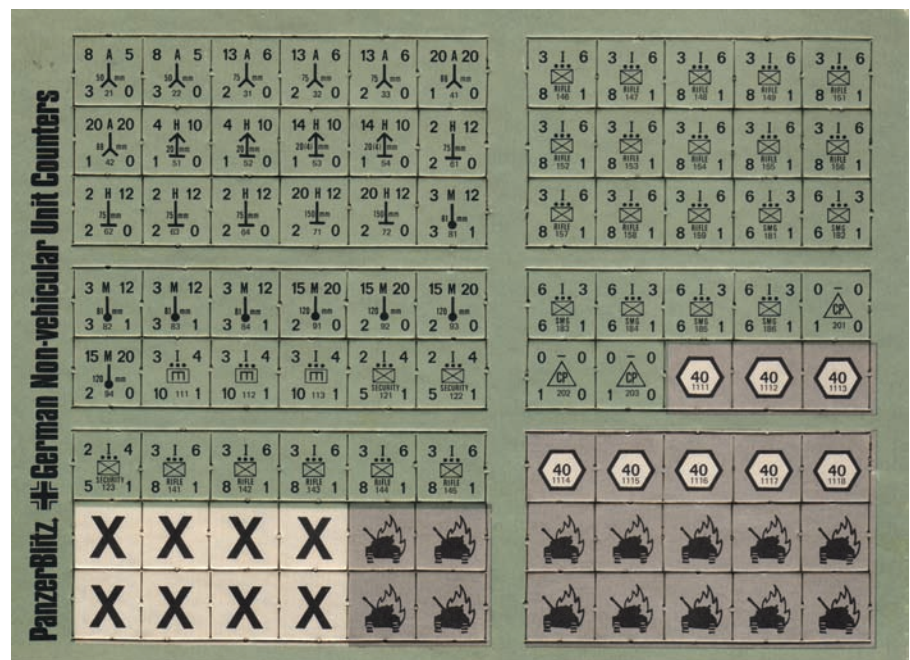
scribe them all would easily double the length of this article, so I will concentrate on the two main ones that the game directly influenced in the immediate years following its introduction.

SPI EVOLUTIONARY BRANCH

AT THE TIME OF ITS RELEASE, there were many people at SPI, especially Dunnigan, who thought that PanzerBlitz represented a fork in the road of tactical armored warfare game development. One path was to continue to develop the system that spawned PanzerBlitz. This was the primary direction that SPI was following in 1971–72. The next game in the developmental evolution of the system was Tactical Game 1, which was published as *Combat Command* in *Strategy & Tactics* No. 30.

Combat Command was SPI's version of PanzerBlitz for the Western Front. It is easy to see that the system had indeed evolved when one looks at the new rules here. The

standard game turn had become more complex, especially in light of including phases for overruns, close assaults, airstrikes, and most importantly, defensive fire. Defensive fire solved the problem of enemy units moving freely in their turn without a worry of being fired on. A friendly unit could defensively fire if an enemy unit attempted to move out of a hex in its zone of control (the six hexes surrounding the hex that the friendly unit was in) and it could fire in the defensive fire phase at the end of the enemy player's turn. The problem was that a friendly unit could fire defensively as many times as the conditions warranted it in a single turn. Thus a unit could fire at four enemy units each that attempted to move around it through three hexes of its zone of control for a total of twelve times during the enemy movement phase and then fire a thirteenth time during the ensuing defensive fire phase, each time at full strength and at no detriment to its offensive fire in its own player turn. Not surprisingly, this made defensive fire altogether too



powerful and the player who was the defender in any given scenario almost always won.

Another aspect about Combat Command was the artillery units for the Americans. They were platoon-size, with corresponding lower attack strengths for them. This was a great way to show the sophistication of American artillery as they could now apply only as much firepower as needed to bring an attack up to odds, whereas the Germans would have to use their whole battery-size pieces, regardless of how many factors were needed. Due to a misunderstanding between the designer and the developer, the designer thought a battery of American artillery meant three platoons. The developer thought that each platoon was actually a battery so that in the scenarios, the Americans only had a third of the artillery that they were entitled to. Another negative aspect for the Americans was that when their infantry units were dispersed in combat, they would remain so for the rest of the game. This reflected the poor American infantry tacti-

cal abilities during the war, at least when set against the Germans, but the result was to make the American infantry units one-shot deals in a scenario. It was also an inaccurate simulation, as not all American infantry units acted so poorly in the war.

Another good idea was to allow three platoons of the same type to combine into a company-size unit of less stacking value. Unfortunately, the defense strength of the company-size counter so formed was only marginally stronger than a platoon-size unit of the same type, the reason being that if all three platoons were operating close together in company formation, it would be easier to destroy them than if they were spread out into three smaller units. Thus company-size units became prime targets in defensive fire situations, making the defending player even more powerful.

But the worst aspect about Combat Command was its scale, 750 meters per hex. In the planning stages, there was not enough room on the mapsheet for the terrain because

tables and playing aids had to be included as well. Accordingly, Dunnigan increased the scale to get the map to fit. This caused some weird situations that demanded new rules to cover opposing units occupying the same hex and was really the biggest turn-off in the game. All in all, Combat Command was another experiment which introduced some new ideas into the system but failed as a simulation.

Not to be discouraged, Dunnigan continued the development of the system into another title, this time being Red Star/White Star, a modern tactical armored warfare game that proved to be very popular; many of the new ideas introduced into Combat Command came to fruition here. The devastating defensive fire was toned down, so that a unit could only fire once during an attacker's turn. Players could still exchange their platoon stacks for company counters (or battalion-size counters for the Russians), but this time the defense strength of these counters was commensurate with their size. The American artillery was still in platoon-size counters but at least there was the right amount of it to accompany the maneuver units in question (a battery supporting a battalion, a battalion supporting a brigade). The scale of the mapsheet was brought down to 300 meters per hex.

If Red Star/White Star had a fault, it was that the Russians were portrayed as they were in the 1960s, not in the 1970s, which the game purported to simulate. This was because the data that Dunnigan was given by the us Army was heavily laced with misinformation so the Russians could not find out what we really knew about them through

Combat Charts

CRT COMBAT RESULTS TABLE

DIE ROLL	1-4	1-3	1-2	1-1	2-1	3-1	4-1	DIE ROLL
-1	D	DD	X	X	X	X	X	-1
0	-	D	DD	DD	X	X	X	0
1	-	D	D	DD	X	X	X	1
2	-	-	D	D	DD	X	X	2
3	-	-	-	D	DD	X	X	3
4	-	-	-	-	D	DD	X	4
5	-	-	-	-	-	D	DD	5
6	-	-	-	-	-	-	X	6
7	-	-	-	-	-	-	-	7

Explanation

N=Unit destroyed.
D=Unit dispersed (turn counter face down) may not move in next player turn, may not fire. Subtract 1 from die roll of subsequent attacks upon it during that turn. Becomes "undispersed" at the end of that player's next turn. See PLAY SEQUENCE.
DD=General dispersed if defender already dispersed by fire in that turn, unit is destroyed. If unit was undispersed treat as normal dispersal.
-No Effect.
Code are always simplified and rounded off on defender's favor. No attacks permitted at worse than 1:4. Odds greater than 4:1 are treated as 4:1.

Die roll additions and/or subtractions affecting a given attack due to terrain or position of weapons characteristics are combined into one net figure and applied to the die. Example: +2 and -1 combined means add one to die roll.
A unit may conceivably be attacked as many as three times in any one turn: first by a mortarfield attack, second by a normal attack, third by Close Assault. Terrain An attacking unit may never take part in more than one attack per turn.
Note: If the defending unit is not in a mortarfield, it could also be attacked by the Overrun method. The sequence of this series of attacks would be: Normal Attack—Overrun Attack—Close Assault.

TEC TERRAIN EFFECTS CHART

TERRAIN FEATURE	EFFECT ON MOVEMENT	EFFECT ON DEFENSE (DEFENDING unit on a given terrain)
CLEAR	Costs 1 MF to enter. Costs truck units 2 MF to enter.	NONE
ROADS	Costs 1/2 MF to enter. If entered from non-road hex, MF cost is that of other terrain road hex.	NONE—(other terrain in road-hex has whatever effect would have had without the road).
TOWNS	Costs 1/2 MF to enter (even from non-road hexes).	Add one to attacker's die roll. Units stacked together in towns must be treated as one combined DF.
WOODS	Costs 1 MF to enter. Vehicular units may not move through green hex-side symbols except on roads. Costs truck units 2 MF to enter.	Add 1 to attacker's die roll.
SWAMPS	Costs 1 MF to enter. Vehicular units may not enter except on roads.	See rules.
GULLIES & STREAMBEDS	Apply MF cost to that of accompanying terrain for entry and movement along gullies. Costs trucks 5 MF to LEAVE. Costs other vehicles 3 MF to LEAVE.	NONE
STREAM FORD	Treat as CLEAR terrain (no "leaving" penalty).	NONE
PONDS	NO units may cross pond-hex sides.	Attacker's AF is halved. See TET.
SLOPES	Costs 4 MF for trucks to enter. Costs all other vehicles 3 MF to enter.	Attacker's AF is halved. See TET.
HILLTOPS	MF cost as per other terrain on hilltop-hex.	Attacker's AF is halved. See TET.

TET TARGET ELEVATION TABLE

UNITS FIRING FROM	INTERVENING OBSTACLE/HEX-SIDE SYMBOLS WHICH OBSTRUCT THE LINE-OF-FIRE WHEN TARGET IS ON...		
	GROUND LEVEL	SLOPES	HILLTOPS
GROUND LEVEL	ALL	BROWN ORANGE See Note B	see Note B see Note D
SLOPES	BROWN ORANGE see Note A	BROWN ORANGE see Note E	NONE
HILLTOPS	see Note C	NONE	NONE

WEC WEAPONS EFFECTIVENESS CHART

CLASS OF WEAPON BEING FIRED	TYPE OF TARGET		
	ARMORED VEHICLES (including Halftracks)		ALL OTHERS (including trucks)
	At Half-Range or Less	At Greater Than Half-Range	At All Ranges
I	May attack only when using Close Assault	Attacking not allowed	Normal AF
A	Double AF	Normal AF	Half AF
H & M	Normal AF	Half AF	Normal AF

the game (such was the Federal government's Cold War mentality of the times). Perhaps the best example of this was that Russian tank companies were made weaker than us tank platoons. With such a handicap, it was no wonder that Russians had a difficult, if not impossible, task to win any scenario. It was only through the variant articles by sympathetic Army officers that the Russian tank counters were given their correct values, along with some other units, and now the game was pretty much balanced. But in the end Dunnigan had had it with the game system and ceased any further development of it, so its evolutionary design branch came to an end.

As mentioned before, Dunnigan had decided that PanzerBlitz was a fork in the road in terms of design development and so in the summer of 1972 decided to take the other branch and start with a new tactical armor game system. This was the infamous Simultaneous Movement System. Work on this system really got started back when Highway 61 was being developed. In that game, as I said above, players would write down their planned movements and then execute them simultaneously. This system was brought forward into State Farm 69, with the writing-down of commands for platoons being introduced there. All of this was set aside when Tactical Game 3 was being created. Dunnigan resurrected them when he ended the development of the other tactical game system.

Very little, if anything, was brought forward from PanzerBlitz into this new system, except the experimental rule of Impulse Movement & Return Fire, which had

provided the original basis of what would eventually become a full simultaneous movement system.

By 1973 Dunnigan had what he thought was the perfect tactical armor game system and introduced it in the games Desert War and Kampfpanzer, and later in lower-level tactical games such as Tank, Sniper, and Patrol. However, the reaction to simultaneous movement was mixed, the biggest complaint being that one could not play big scenarios with it. This led to a more modified version called Simultaneous-Sequential Play System, which was introduced in the games Panzer 44 and Mech War 77 and proved to be Dunnigan's long sought answer (at least for the time being).

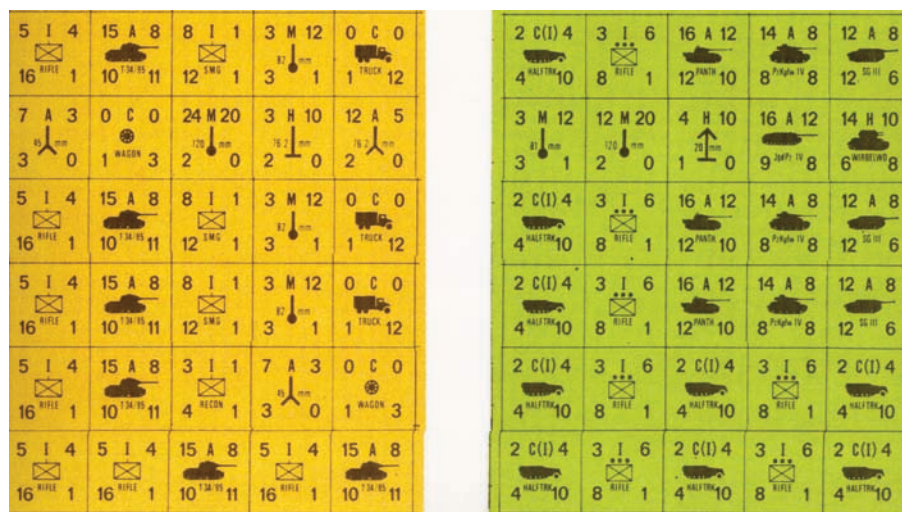
AVALON HILL

EVOLUTIONARY BRANCH

AFTER MAKING THE CORRECTIONS to the scenarios and periodic entries in the Question Box in *The General* magazine, the people at Avalon Hill decided to sit back and let PanzerBlitz run its course, despite pleas from players for a Western Front version of it. Since they knew that SPI was already working on their

Western Front version (Combat Command), it was felt best to wait and see how it did when it was released. After Combat Command became a confirmed failure, Avalon Hill decided to commit to making their version of a Western Front-style PanzerBlitz, which they would eventually name Panzer Leader. Following their policy for new titles at the time, they went to an outside source for the game. Spartan International Inc., a national gaming club that Avalon Hill had close ties with, volunteered to design and develop it. This was in late 1972 or early 1973. A publication date of the fall of 1974 was decided on in order to give Spartan plenty of time to do the job right.

Spartan International appointed a committee of veteran gamers to design and develop Panzer Leader. Work proceeded at a slow pace as there was plenty of time. The committee was close to finishing it when in August of 1974 Spartan International Inc. underwent a change in leadership. The new regime did not support the project – not that it made that much difference, as most of the members on the committee left Spartan after the change. They did not like the new administra-



tion and took their work with them. Avalon Hill kept a wary eye on what was happening at Spartan as the new regime kept telling Avalon Hill that the game was still in the works and that it would arrive on time the next month. However, in September of 1974, three days before the game was due for publication, Spartan announced that the committee for the game had been disbanded and that there would be no Panzer Leader. In truth there was no one left on the committee and the new leadership at Spartan had got tired of maintaining the fiction that there was one.

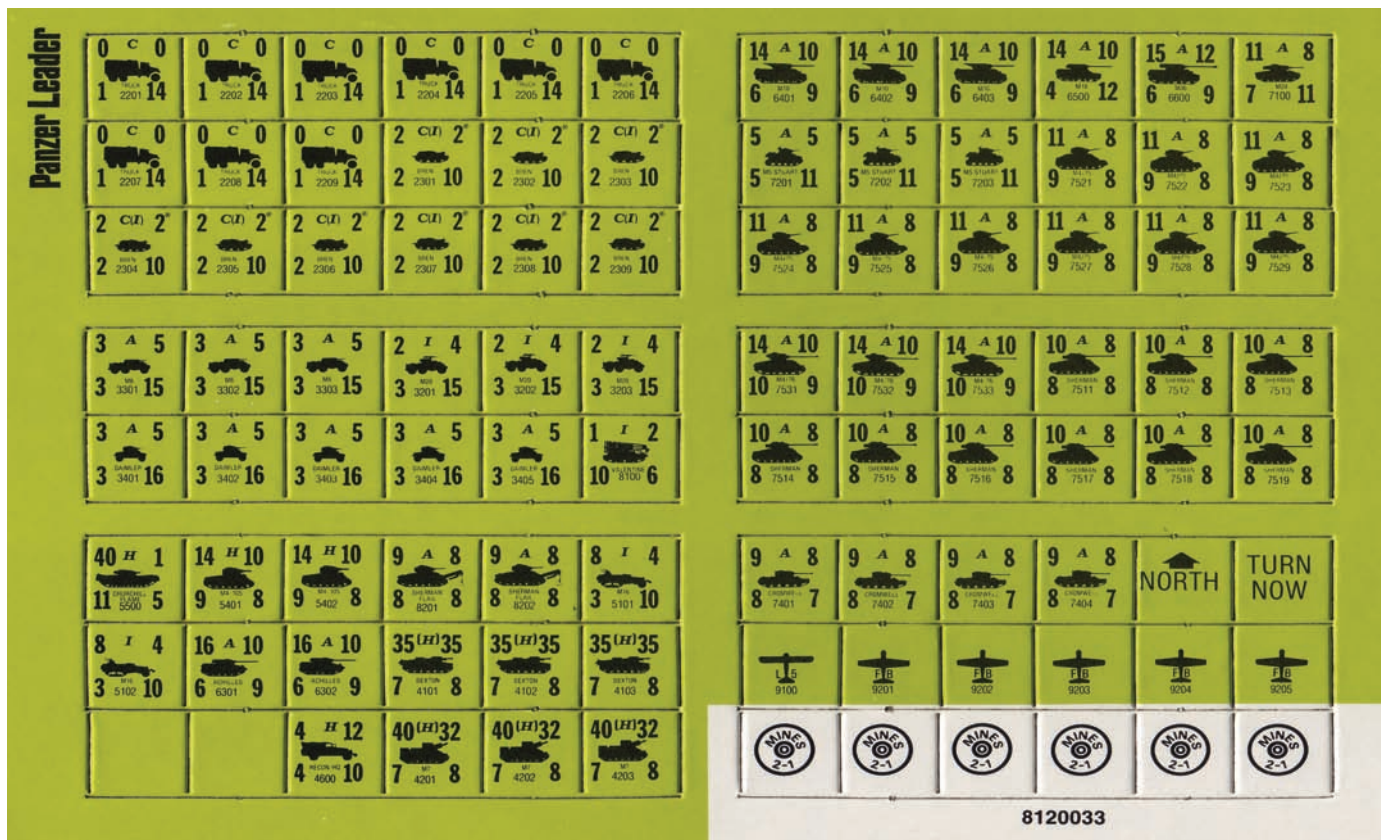
Randall Reed at Avalon Hill saw this coming (he had sources inside Spartan), so he was ready for the worst-case scenario. When he got the news he put his plan into action. The story that he designed and developed Panzer Leader in three days, however, is a myth. In three days he

got the first rough draft of rules done for playtesting by his team at the Hill and by Interest Group Baltimore, the company's chief outside playtest group. The development of the main components of the game was also started at this time. It took over a month to put Panzer Leader together as the publication date was pushed back six weeks.

Because of the short time available, Reed thought that the best option was to develop Panzer Leader directly out of PanzerBlitz. Therefore any new rules were to be taken from variants which were either published in *The General* magazine or other publications, or from articles on file at Avalon Hill. However, the new rules were heavily reworded to avoid accusations of plagiarism. This was wise as most of these rules had had their origins in the Norman Beveridge series of PanzerBlitz variant articles published

in *The Spartan Journal*. The counters were another problem as Reed did not want use Dunnigan's system in total in figuring out the factors for the counters as he did not agree with all of the facets of the original Dunnigan System. However, due to shortness of time, it was felt best to leave the German counters essentially alone (except for some minor changes in the range factors of the infantry and the four vehicle tank platoons) and concentrate on the Allied counters.

It was here that Reed greatly added to the Dunnigan System, making it would eventually become in the end. The scenarios were the last items to be done as they required the most playtesting in a month's time but there were still some errors that were missed and would only be corrected after the game was published. The rules, which would seem to be a patchwork job based on the





above description, actually worked together rather well. Panzer Leader was released in the late fall of 1974, first as a mail order item, then as a general distribution item. It did well, with over 100,000 copies sold. Because PanzerBlitz and Panzer Leader were closely related, it was easy to reverse engineer the rules of Panzer Leader back into PanzerBlitz. Avalon Hill then settled back for a few years before starting work on the next game in the series, Arab-Israeli Wars.

In 1976 it was decided that the next game would be based in the desert. This was logical as the battles in North Africa were a popular subject. But the Arab-Israeli wars were even more popular, given the recently concluded one in 1973, so it was decided to bring the PanzerBlitz/Panzer Leader system into

that theatre. By this time Avalon Hill was finally assembling its own design and development staff although they still used a number of outside designs. They also had plenty of more time to work on the game. Randall Reed again headed up the development team, along with Seth Carus and Robert Hamblen, with Russell Vane assisting in scenario development.

Arab-Israeli Wars game brought the PanzerBlitz game system into the modern era and many changes had to be made to show this. For one thing, all vehicle units were slowed down dramatically, having their top speed divided by five instead of three to get the movement factors. This reflected the fact that vehicles, especially armored ones, almost never move at their top speed except to get out of danger, and so

on the average, move at a slower top speed that is easier on the engines. Another change was that artillery units now had an attack factor that would be applied to each unit in a target hex, regardless of how many units were there. There were other changes, too many to list here, but needless to say, the PanzerBlitz system finally reached its pinnacle of development in the Arab-Israeli Wars game. However, when it was released in the fall of 1977, it met with a lukewarm response. It seems that players were getting bored with the PanzerBlitz system and were getting excited about a new tactical system that Avalon Hill had also released also that year: Squad Leader. So Avalon Hill ended its evolutionary line of development of the PanzerBlitz system here.