

and the number of pilots that are lost, wounded, or that bailed out unharmed.

The Tactical game underwent its first stafftest a few weeks ago. Brad Hessel, commander of the Luftwaffe *Luftflotte Zwei*, conducted an overpowering Eaglestrike against the radar stations on the southeast coast of England, inflicting heavy losses on Fighter Group 11 (commanded by yours truly). Needless to say, this test led to some design changes. The crafty German successfully employed hunting packs of Me 109's against my fighters, downing an embarrassing number of Hurricanes. However, I was able to bag a number of his bombers and, although he bombed many radar stations, none was put out of operation. The mechanics worked beautifully in this test, but showed that the tactical game would take a long time to play, thus leading to the happy decision to include the Strategic game.

Staff member Eric Smith and ace playtester Tom Zombeck conducted the first playtest of the Strategic game last week. Tom, as the German, did not use fighters in hunter groups. Instead he used them to fly close escort with his bombers at roughly a one-to-one ratio of fighters to bombers. This proved disastrous. When Eric saw these huge formations threatening his vastly outnumbered squadrons he feared the worst, but then watched with delight as his Spitfires and Hurricanes made mincemeat of the impotent, poorly protected bombing formations. It was a glorious battle for Britannia. Some problems with the combat system arose and the method used to assign German raids proved a bit cumbersome. These problems are foremost in my mind as of this writing.

A game like this is only as good as its research, so I feel I must mention my ace in the hole, Jeff Gibbs. Jeff is in the process of writing an article to accompany the game (between bouts of law school) and has provided me with limitless amounts of useful information for the game. His help has saved me from despair and will contribute heavily to the quality of the final product.

John H. Butterfield

### Kursk

Designing a conflict simulation can prove as much an education for the designer as the finished product will for the avid player. The designer must make his statement — or interpretation — about a particular situation; the more detailed the level at which he presents the game, the more constrained he is by the historical events. The designer of a good game will digest the vast quantity of trivia he discovers into a form palatable to the gamer. In designing a good game, a designer should also mature his skills and perspective on his profession.

It remains to be seen whether *Kursk* will be accepted by the general public as a good game. The design and development process has enabled me to improve my abilities in both areas. Much of this is due to working with highly skilled people at different stages of the game. *Kursk* is a synthesis of these peoples' work, and as such should be an excellent study of a most important battle.

A game can be a good simulation only if its subject matter is thoroughly researched during the design stage. The Eastern Front during World War II may be one of the most popular subjects for wargames, but information on that theater of war is hard to come by. The main reason for the paucity of information is, of course, the current Soviet government's unwillingness to release facts and figures about the Great Patriotic War (the official Soviet name for World War II). The most readily available sources were captured by American troops from the Germans during 1945. The *Lage Ost* maps and the official German Order of Battle listings are the two best primary sources, and while these are fairly accurate in describing German units and German-occupied terrain, the data given on the Soviets is suspect. Furthermore, Soviet units and positions are about 50% to 75% accurate up until late 1942; after that, the Germans were likely to invent whole Soviet armies if they found more than one refugee in a given part of the front.

2 Pz Army XXXX 9 HO 5 1-1-8	II 653 2Pz 11b2-7	XX 282 42 11o5c5	XX LAH 2SS 26o8-8
X Mil 9 3w1-5	XX LAH 2SS 8-2-8	XX 20Pz 47Pz 16b6-8	SS Wiking XX 16j6-8
III KG 3-2-5	1	XX 36 23 7N4-5	XX 16PG 4Pz 14j5-8

Some typical German units

Faced with the realization that most of the games previously produced on the Eastern Front were — in all probability — based on partially erroneous information, I was forced to look for someone who had made a detailed study of Kursk and could read Russian (the last being necessary because the Soviets began to release records from World War II to Western countries during the early 1970s). An employee of the National Archives was kind enough to volunteer his services on the project, along with an Eastern Front aficionado who doubted the authenticity of the first draft *Kursk* map. Richard Gould, our man in the Archives, had access to maps of the area in Central Russia in which the battle was fought, many of which dated from the 1940s.

The battle of Kursk was fought in rolling steppe country. Central Russia does not have the great expanses of flat country that the Caucasus does, so it was necessary to show the undulant nature of the countryside. Particularly defensible rises in elevation are represented by depression hexsides — many of these are river banks. A rarer form of elevation-related terrain is the hill hex; a hill is almost always used as the linchpin of a defense line by the Soviets. Defense along depressions is a bit trickier: a unit must be placed in a hex that is "above" an enemy unit's position.

No Eastern Front would be complete

without woods, a river network, and swamps (just as Civil War battlefields must have a Peach Orchard and a Sunken Road). Heavy forestation on the map occurs around a branch of the Donets and almost due north of the Kursk "bulge" (so-called because an otherwise straight 1000 kilometer front line was interrupted by Soviet positions as deep as 100 kilometers into German lines). There are scattered patches of woods to be found all about the map, usually in clumps of two to four hexes. Rivers are, as always, depicted along hexsides. River lines are both an invaluable and treacherous ally: they can be used to effectively stall the enemy, but once enemy units cross the river, they can "roll up" to a defense line dependent on that river. Major rivers are the nearest things to impregnable positions; an attacker had better be prepared to suffer high casualties in breaching a major river defense. Swamp hexes and lake hexsides make token appearances, but they are so few and far between that their effect on play is minimal.

Population centers invariably attract a great deal of attention in the midst of battle. If the folk are friendly, they may be recruited to aid the troops; if foe, they must be contained and prevented from giving aid to the enemy. Civilian centers are classified into major and minor cities and villages. The major cities include the ubiquitous Bryansk and Orel, and the Kursk of the title. A major city is the best single defensive position for a unit. The more preponderant minor cities give a minor defensive benefit; villages are presented on the map solely for the entertainment of the historically curious.

The other man-made feature which dominates the twentieth century battlefield is the transportation net. Roads are handled in a straightforward manner: any unit travelling along a road may move twice as fast through clear terrain. The rail net is a more complicated affair, which is rendered here more accurately than in previous designs. A rail hex may be either single- or double-track, and the capacity to transport troops through such a hex is accordingly limited. The ballyhooed difference in rail gauges required to accommodate German and Soviet trains is recreated simply: neither player may use rail movement past his original front line.

Anyone at least vaguely familiar with the battle of Kursk will remember the tremendous effect of the Soviet entrenchments upon the outcome of the battle. Certainly, the entrenchments of both sides are the most visible terrain features to be found on the *Kursk* map. The Soviets had up to six entrenchment lines at the main German approaches; the Germans fortified the areas through which the Soviet counteroffensive was expected to pass just as extensively. The entrenchment symbols are coded to inform the players when they come into play. The majority of the Soviet entrenchments were constructed between 15 May and 4 July; the majority of the German entrenchments between 15 July and 1 August. Entrenchments are simulated in two ways on the map: as hexes and as hexsides. A unit of either side may gain the benefit of being in an entrench-

ment hex (originally, only a unit of the appropriate side could gain the benefit, but a playtester rather sarcastically pointed out that if the Germans occupied a Soviet entrenchment, they would not hesitate to use the already dug defensive position). However, the entrenchment hexside aids a friendly unit only when it is attacked through that hexside. The hexside represents both auxiliaries attached to the position and forward defenses (such as barbed wire); these will have to be destroyed for the enemy to breach the line. As with rivers, units may be "rolled up" in an entrenchment line.

There are several versions of the transliteration of Russian names into English; the one in use on the *Kursk* map is that currently accepted by the Soviet government. The division between Soviet Socialist Republics (somewhat like Canadian provinces) is shown, along with the name of all railway lines. If the detail presented in the map seems a bit excessive, consider that such esoterica as partisan bases were left out. The finished version of the map will come to your living room in glorious full color.

The profusion of terrain types is not, however, intended to make the map look pretty. That will be due to the Art Department's ministrations. As a player moves a unit, he will be faced with many decisions of a tactical nature, as he decides how to best employ the local terrain. Games of *Kursk* will often be won and lost during the (I hesitate to trot out that overused word "subtle") interplay of unit positions and the terrain.

The compilation of the Orders of Battle did not require the amount of decision-making that the map did. The strength ratios were achieved by comparing unit effectiveness, rather than head count; moreso than during any previous era of history, the *number* of men matters little, but the equipment, training, and morale of those men become the key determining factors in assessing a combat strength. Similarly, the Step levels (roughly equivalent to a defense strength) were arrived at by the unit's ability to operate in the face of significant losses. When computing the movement allowances, I accepted the judgment of my peers with a few minor modifications (which is a polite way of saying I used the values established in *Panzergruppe Guderian* system games).

The German unit designations and subordination chain were easy to find; many sources confirmed and expanded upon the two aforementioned sources. The Soviets proved a tougher nut to crack, but our indefatigable researcher (take a bow, Mr. Gould) assembled a 90-95% accurate OB with "best guesses" filling in the few remaining gaps. The resources of the National Archives, among other sources, enabled Richard to provide me with the effective strength of both armies, as estimated by the commanding officers. Additionally, I was provided with the army or front sector in which each unit could be found during the first week of each month (May, July and August); this information will be reproduced in the *Kursk* package, so that players can see what design decisions were made, and also to

provide OB buffs with what we believe is the most accurate Kursk OB to be found anywhere.

Once the supporting material had been compiled, the game system was ready to be put in shape. The first — and easiest — decision was not to use the *PGG* game system. This cavalier disregard for the feedback suggestion was necessitated by the incompatibility of the situation and that system. *PGG* games are predicated on a strong attacker moving in on an initially weak defender. The extent of the fortifications was a chief factor in Kursk being unique among East Front battles; the situation cried out for a new treatment.

XX ? 10 3G2-4	VoronzhFt XXXXX HQ 0-1-4	XXX 16Gd 11G 12B5A4	XXX 1Tk BF 13L4-7
XXX 6GM 4Tk 7-2-7	XXX 6GM 4Tk 18J4-7	154F CF 2R3-2	XXX 20GA 4Gd 14Y6-4
XX 8NK 4Gd 4Y2-5	Stalin X Opertv	AT 10-3-4	BryanskFt XX 3-2-4

Some typical Soviet units

Movement is handled along conventional lines. The basic "movement points are expended as a unit enters a hex or crosses a hexside" rules, which have long ago been memorized by veteran gamers, govern standard movement. Rail movement is regulated by both the total number of units which may be moved by rail in a turn and the number of units which may be moved through an individual rail hex. The Soviets were severely hampered by their rail capacity throughout this period of the war. The troops of the Southwest Front, most notably, were prevented from reaching the main avenues of German advance on a timely basis. The uncanny German ability to inveigle units behind Soviet lines is represented by infiltration movement. One unit must cover for the unit which moves through a Soviet unit's Zone of Control, and that unit may not move through a river or entrenchment hexside. The ramifications of this rule are most important in play: no fewer than seven versions were used in testing before designer and playtesters were satisfied.

The most severe problem of the first *Kursk* prototype was unit density. The battle of Prokhorovka, arguably the turning point of Kursk, had sixteen divisions plus assorted regiments in the equivalent of two hexes. Since the early version used an exclusively divisional level OB, revamping or a new federal zoning law was necessary. The OB research solved part of that problem — the existence of corps level units had been forgotten — and a simple stacking point limit in each hex cleaned up matters. Unit size determines the stacking point value of a unit, so for example, a division is worth 2 points, and a corps is worth 3.

The combat system entailed a good deal of thought before it could be finalized. Cir-

cumstances make, the Kursk battle appear anachronistic — World War II fighting units engaged in combat strongly reminiscent of World War I. How then to recreate this oddity? Use a combat resolution procedure which combines elements of World Wars I and II combat (actually, the analogy has been strained slightly for effect). Units retain the usual attack strength rating but, instead of a defense strength, have a step value. This value translates to the staying power of the unit. As a unit loses steps, its attack strength will decrease, though its stacking value will remain the same (stacking here is a measure of organization, not of raw numbers). When a unit (or stack of units) receives a combat result, the result may be converted into step losses or hexes retreated — the classic military tradeoff of ground surrendered or lives lost.

Artillery and anti-tank guns played a most important role in the battle. Most historians recall the Soviet guns wreaking havoc on the German vanguard, but the Germans had considerable heavy weapons and artillery capability also. It was just that the German front line units presented such nice targets for the Soviet gunners. If a defending stack receives anti-tank support (the Soviet guns are organized into individual units, while the German guns are attached directly to headquarters), the defending player conducts an anti-tank attack upon the attacking units *before* the regular combat is resolved. The anti-tank guns will be chewed up pretty fast, but they should take a good chunk out of the attacking armor. The artillery affects battle in another way: it suppresses (prevents effective participation in combat) primarily infantry units and, secondarily, armored units. The unfortunate infantry being suppressed by artillery will also be the first to go should losses result (and they always do; the combat system is nothing if not bloody). Artillery is quite versatile: it can be used to barrage enemy units or, optionally, to counterbarrage other artillery units. The art of counterbarrage was in its infancy during 1943 but, as German tankers could attest, not the art of barrage.

Supply and communication are two crucial aspects of modern warfare which bore the gamer to tears. Thus, unless those bugbears are the *raison d'être* of a game, make the rules simple. Each unit is subordinate to a headquarters, and one does not need intimate familiarity with the OB to know which unit goes to which HQ: the actual unit designation is printed in small type on the top of the counter, with the HQ to which it is subordinated printed in large type underneath the first designation. Units must be within a certain range of hexes to be in supply or communication. If a unit is out of communication, it is penalized in movement and, if it is Soviet, combat. If a unit is out of supply, it is penalized in both movement and combat. The players do have a limited ability to detach units from their parent headquarters, and to attach units to a new HQ.

The players can alter the capabilities of their units by placing them in modes. Each mode represents a posture a unit may adopt

during battle. A unit in Assault Mode is prepared to attack until it takes huge losses. A unit in Mobile Mode is flexible — it can attack or defend with equal ease. A unit in Static Mode is prepared to hold a position despite expected large losses. As one might surmise, the Germans deploy a goodly number of units in Assault Mode at the beginning of the July scenario, while the Soviets have most of their front-line troops in Static Mode. A unit's mode has far-reaching effects: it determines a unit's Movement Allowance; whether it may conduct an overrun; the number of times it may attack; the combat column used; and how far a unit may retreat. Thus, units may retreat only as far as their mode will allow, whether on offense or defense, and may not choose to avoid losses by bouncing away from the front line (the playtesters had a lot to say — none of it very complimentary — about units retreating 30 to 40 kilometers during the Combat Phase, and then moving back to the front line during the Mechanized Movement Phase). Disruption is an involuntary mode, which occurs only as a result of overrun — suffice to say that no player purposely places his units in that condition.

After the battle has raged over several Game-Turns, the front-line units will begin to disappear or become woefully weak. Players are allowed to break down units into smaller units to plug holes in the line. Soviet rifle corps may be traded in for three divisions, while German infantry divisions may be exchanged for two *Kampfgruppen*. The players may also combine these smaller units back into the parent unit, minus any losses suffered. Optional rules cover the air and partisan operations associated with the Kursk battle.

The game system is certainly ambitious in scope, though many of the mechanisms described are simple. I became satisfied with the game as simulation early on in development, but became concerned about game length. Set-up time required two or three hours, which was just too much. The problem had been mechanical: the players were expected to know the organization of the two armies as thoroughly as the designer did. Now, each unit has a deployment code on at least one of its faces: a player will be able to tell at which strength to deploy a unit at a glance. Another piece of support material is a deployment display (for each side), which organizes every unit in the player's army; a missing counter can be easily tracked down. And if anybody out there can trust an SPI designer with an estimate of time to play his game, *Kursk* can be played to a decision in 4 hours, and finished in no more than 9 hours (a weekend afternoon and evening).

The battle of Kursk presents many problems to the aspiring game designer. It is regarded as a classic battle, and deservedly so. As a game situation, it has much the same flaw as Agincourt: the German attack as conceived could only prove disastrous. Unlike Agincourt, there were elements of a game in the German assaults upon the "shoulders" of the Kursk salient. The July scenario could be made a game by stealing a march from the

first *Kursk* game (1971): have each scenario take no more than ten turns, and concentrate on the area with the most action. Thus, while players may have up to 150 units under their command, they are unlikely to move or attack with more than one-half of them. The terrain on the front line inhibits isolated attacks; a player must use his carefully husbanded reserve to launch an attack at a particular point in the line.

The burden of the attack is upon the German player in July. He does not have to secure Kursk, as Hitler's plan envisioned, but he must reduce the salient without taking crippling losses to his armor. (Soviet victory depends on weakening German armor, which, at that time, was the single best fighting force in the world; German victory depends on ground gained — if the German succeeds, the slow Soviet infantry will suffer tremendous casualties.) The Soviets have both on- and off-map reserve units. The Germans will trigger the on-map reserves when they attack. The Soviet on-map reserves are substantial enough to stop the Germans, but are widely dispersed over the map; the Soviet player will make his most important strategic decisions when he chooses which reserve armies are released first. If he releases those armies furthest from the salient, he will have his greatest strength concentrated by Game-Turn 4 or 5, but by then the Germans may have overrun the central position (which basically wins it for the *Wehrmacht*). If he releases the armies in and around the salient, he may be able to hold the Germans, but help will be a long time in coming. The off-map reserves will swing the battle to the Soviet side, but the Germans have to penetrate far into Soviet territory before the Soviet player can receive them. (The Soviets, who make Herman Kahn look optimistic, believed that the Germans could have assaulted Moscow as a result of the Kursk offensive, and so held several armies in reserve to defend the capital.) The outcome of the July scenario is usually settled in a desperate melee which exhausts both armies around turn 5 or 6.

The May scenario has superficial resemblances to July. The starting forces are roughly the same, though somewhat weaker, and the burden of attack is still on the German player. However, the Soviets only have two trenchment lines constructed. Instead of having to slug the Soviets into submission, the Germans have to conserve their forces until the time they breach the second defensive line. If the Germans can breach that line in force, the Soviet off-map reserves will probably be triggered into play, which means chances for a German victory are good. May runs nine turns (two turns longer than July), and greatly increases the importance of proper endgame play. The rash player who squanders most of his forces to achieve a temporary advantage in the early going will reap the whirlwind in the late turns. The German player has more a chance of achieving the historical goal during the May scenario, though it is still no easy task.

The August scenario is the personal favorite of the designer. The complexion of

the game changes dramatically from that of the two earlier scenarios. The Soviets have begun their late summer counteroffensive after the failure of the German assault. For the first time in the war, the average German soldier believes that he can be defeated by the Soviet hordes. The Soviets have brought many of their reserve armies into action with the veterans of July. The Germans get bashed on the first turn, and are forced to give ground. The Germans are also restricted to the number of unmodified attacks they may make on a given turn; there is no limit on the total number of attacks, just a stiff penalty once the limit for the turn is exceeded. The German units retain their abilities for mobile defense, at which they excelled. The Soviet player must manage the fragility of his armored and mechanized units (they have high strengths but low step values) in trying to breach the myriad German defense lines. The Soviets do have the advantage of tremendous artillery barrage capability, but the German anti-tank and artillery capacity can put a substantial dent in the attacking Soviet units. The August scenario is wild and woolly, and tests the players' skill in game play as much as it informs them about the counteroffensive.

Obviously, I believe that *Kursk* succeeds in doing what the design intended. An extremely sharp playtest and blindtest crew is responsible for the fine tuning of the game. One playtester disagreed with the statistically 'correct' Combat Results Table in use a few months back, and redistributed the numbers to make an improved CRT. The blindtest crew further refined the table, removing a 'crock' at the extreme ends. These people were generally knowledgeable about the period if not the battle. A good number of the rules heretofore described were threshed out by these testers. The original versions were often completely revised, to the benefit of the game. There is a world of difference between testers who simply balance the game and those who become active in the development process.

The rules to a wargame are usually the most imperfect part. The combination of conveying ideas as clearly and simply as possible, technical writing and struggling with the peculiarities of the English language has defeated many a rules writer's attempts at lucidity. While I am often responsible for editing other people's rules and compiling addendas, my own rules have been more inconsistent than I would like over the years. A technical editor who was most distressed about the *Armada* rules was kind enough to volunteer his services in editing the *Kursk* rules. Because of his and the blindtesters' efforts, the rules will probably be among the cleanest ever (fatal last words, Mr. Goldberg).

*Kursk* is certainly my best effort from a technical standpoint. It is a conscious effort to treat an Eastern Front battle in a manner not often used in wargames. If my perspective has not been warped by being too close to the project, *Kursk* will be a worthy acquisition for the wargamer. *Eric Goldberg*