La Guerre à Outrance

Rules and Guide to Play

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I. Introduction

La Guerre à Outrance is a computer-assisted system for miniatures wargames of the 1870-1871 Franco-Prussian War at the grand tactical level. Using the brigade as the basic unit of maneuver, it allows entire battles to be fought with a minimum of space and a minimum of figures. Designed for 15mm scales and smaller, it uses a popular basing system for the period. (It can be played in 25mm or larger scales by doubling all base sizes, measurements, and distances.)

The game is intended to provide a simple mechanism for doing the miniatures wargaming equivalent of a chess problem - a lot of the details which might go into longer games using lower-level units, a larger table, and many more figures are abstracted, placing players in the boots of army commanders. Games are quick and relatively decisive. The system has no intention of supplanting other miniatures wargames of the period (*Age of Valor*, *They Died for Glory*, and *1870* are all excellent rules - we are spoiled for choice) but rather to allow wargamers to do something different with their figures, in addition to playing these more tactically-oriented games.

Players will find that *La Guerre à Outrance* places them firmly in the role of corps and army commanders: anything which is the purview of lower-level commanders is abstracted, and calculated using a model of probabilities within the computer. This extends even to such aspects of battle as formations: these would be dictated by brigade commanders as they fulfilled their orders, in line with national doctrine. (Corps commanders do not order brigades to form column!) In this game, formations are more an indicator of actions being currently taken in response to orders - and to the attendant vulnerabilities of troops - than they are a literal depiction of the unit in question. Similarly, the on-going skirmishing and unimportant combats assumed to be taking place are completely ignored. What is represented are the outcomes of decisive actions. This produces a game which may seem strange to some miniatures gamers who are used to simultaneously commanding at the level of army, corps. division, and brigade. It also has the effect of speeding play considerably.

The system is designed to run on any computer or device which has a javascript-enabled web browser. Multiple versions of the software can be run at the same time in a single game. As a computer-assisted miniatures game, *La Guerre à Outrance* uses a minimalist design. It does not duplicate any of the information which is represented on the tabletop, but functions strictly as a "wargames calculator," replacing the dice-rolling and chart look-ups of other systems. It requires no computer set-up: players must only provide figures, terrain, rulers/tape measures (in inches), and a smart-phone, tablet, or computer which can run the game.

It should be noted that an earlier version of this game was released on the *wargamingmachines.org* site in 2018. This game is much different, resulting from

considerable playtesting: it has been changed into a brigade-level game. The overall intent, and basic mechanisms have remained the same, however.

The Franco-Prussian War is a fascinating one, foreshadowing the horrors of the Great War and witnessing, for a last time, the Napoleonic glory of cavalry charges and attacks in massed columns. New technology - better rifles, better artillery, even machineguns - all appeared on the battlefield. The generals did not always understand the implications of these changes, and sometimes made mistakes, guided by the outdated principles of war as they had learned it. This game system gives players a chance to see what might have happened instead.

^ II. Troop Types, Scales, and Basing

The basic troop types in this game are infantry, artillery, and cavalry. Basic units are at the brigade level, rather than at the lower levels of the regiment or battalion like some other systems. Each type of unit will be described here, along with the typical organization of forces during the Imperial phase of the war.

Infantry Units: The basic infantry unit in the game is an infantry brigade. Infantry brigades were historically composed of two regiments, each of three battalions. The battalions themselves were of varying size, a factor which has been incorporated into the combat effects produced by the system. It was typical for a light infantry battalion to be attached to the division, either as part of the first brigade (French chasseurs) or at the divisional level (Prussian jagers), but these are not represented on the tabletop. Each infantry brigade will be represented by 4 bases, each 1 inch wide and 3/4 to 1 inch deep. The number of figures per base should be determined by aesthetics and figure scale - it is unimportant to game play. Each pair of bases notionally represents an infantry regiment.

For the French, a typical infantry division will consist or two infantry brigades plus the divisional artillery (see below). For the Prussians, there will be two infantry brigades, a divisional artillery, and a cavalry regiment (see below). If players wish to field individual infantry regiments, separated from their parent brigades, then these may be represented by a pair of bases. (This should be the exception, however, and not the rule.)

There are three quality levels: "Guard," "Line," and "Landwehr" (Prussian) or "Mobilisé" (French). Notionally, these represent exceptionally good troops (Guard), average troops (Line), or second-rate troops (Landwehr/Mobilisé), regardless of the names of the units or troop types historically.

Note that brigade formations in the Franco-Prussian War were much larger than their counterparts in some other 19th century conflicts, notably the American Civil War. They have an increased ability to fight to the rear and flanks when compared with lower-level formations, and typically included a very high proportion of skirmishers. The game system understands the different compositions of different units, and assigns them

different strengths based on the available weaponry and troop types when performing calculations. Standard doctrine (and historical performance) are also accounted for, as there were differences between the two sides.

Cavalry Units: There are two types of cavalry units in this game: cavalry brigades, and cavalry regiments. Prussian infantry divisions included an attached regiment of cavalry, which in this game is represented by two bases. This represents 3 or 4 squadrons of cavalry. Brigades are typically twice this size, representing two cavalry regiments of this size operating as a brigade - a cavalry unit of 4 bases. Cavalry brigades of 3 regiments should be represented with 6 bases. Cavalry brigades might or might not have a battery of attached horse guns: cavalry units have a very limited capacity for fire, as a single battery is not considered to be significant at this scale of play. The individual batteries of attached horse artillery are not represented in the game. Also, although some cavalry was equipped with firearms, doctrine was such that they were generally only used for skirmishing. Dismounted action was not unknown, but was not seen at the level of entire brigades, and is also ignored by the game. Each cavalry base represents two historical squadrons.

The distinction between heavy and light cavalry is also ignored: while both types have advantages in specific tactical situations, these are seen as cancelling each other out. Many cavalry brigades were of mixed types, too. These are not seen as important for the purposes of game play: all cavalry is treated the same as regards type.

Cavalry is assigned a quality in the same fashion as infantry: "Guard," "Line," and "Landwehr" (Prussian) or "Mobilisé" (French). These names are shorthand for quality ratings: technically speaking, there is no such thing as "Mobilisé" cavalry, but the ad-hoc formations seen in the Republican phase of the war might need a lower quality rating, so we use that term for consistency's sake.

Cavalry bases should be 1 inch wide and .75 to 1.25 inches deep.

Artillery Units: Each artillery base represents two 6-gun batteries. Prussian divisional artillery - consisting of 4 batteries historically - is represented with two bases. French divisional artillery is represented with only a single base, which includes a proportion of mitrailleuse. (It should be noted that the French saw the mitrailleuse as a replacement for the short-range effectiveness of cannister from heavy smoothbores, rather than as a machinegun-type infantry weapon.) The game system reflects the strengths and weaknesses of the weapons capability, ammunition availability, and organization of these arms, but it is important to note that an artillery base as represented on the table is always a full two batteries - single-battery units are not and should not be represented.

French corps artillery reserves were generally of 8 batteries (sometimes only 6), and so should be units of 3 or 4 bases. The army artillery reserve contained a total of 16 batteries (not including horse artillery) but would generally not have been deployed as a

single unit. It is recommended that the largest French artillery unit be made up of 4 bases (8 batteries).

Prussian (and allied German) artillery reserves show more variation, ranging between 2 and 7 batteries, with 6 batteries being the norm. Thus, a 3-base unit will be the norm (6 or 7 batteries) with units as small as a single base (2 or 3 batteries) or two bases (4 or 5 batteries). Some cavalry divisions have 2 horse batteries, and these should have a single-base divisional artillery unit. The army reserve was very large, but was not employed as a single unit. Scenarios should specify how many of the Prussian reserve artillery batteries are available based on the historical record, always bearing in mind that each base on the table is two full historical artillery batteries.

Artillery units should be mounted on bases 1 inch wide and 1 to 1.5 inches deep. All artillery units are given the same quality rating in this game, as the technical nature of artillery service tended toward standard levels of competence.

Generals: This game represents corps- and division-level generals on the tabletop. Each is represented using one to three mounted or dismounted figures (in 15mm - more for smaller scales) on a circular base which is .75 to 1 inch in diameter (alternately use a 1-inch square base). Each represents a general and his attendant staff. They have no combat function (nor are they subject to attacks) but do have an influence on how well troops execute orders (notably movement, assault, and regrouping actions).

Markers: Only two types of markers are needed for this game: disorder markers and demoralization markers. These can take any form - counters, small round bases with one or two casualty figures on them (one for disorder, two for demoralization), etc. Optionally, markers may be used to indicate which units have already gone this turn (not needed for smaller games).

Game Scales: There is no figure-to-man ratio for these rules - each pair of bases is effectively a regiment, with typical differences in field strength assumed by the game system. Artillery bases represent 2 batteries of 6 guns apiece. Each inch represents about 300 yards, giving us a 6-inch mile (approximately 1.5 kilometers). This means that most period battlefields (including Sedan) can be depicted on a 4-foot x 4-foot wargames table, and in many cases on a smaller one. Each turn represents an hour of elapsed time. Consequently, combats tend to be decisive in their effects, even though they do not represent continuous combat of an hours' duration in most cases, but a shorter period of intense conflict surrounded by other related activities.

Gamers who are used to more tactically oriented rules will find it strange that units cannot combine activities. Remember that only the most significant activities are reflected here. Individual volleys, battalion evolutions, and skirmisher interactions are simply not explicitly represented in this game, being deemed below the notice of corps commanders. They are assumed to be on-going. More significant operations, however, take time. To give you an example: at Wörth, the large Prussian grand battery in the center of their line took almost an hour to deploy into well-sited firing positions, and

shelled the French batteries on the hill opposite for 45 minutes before causing them to withdraw. Gamers want to see this happen instantly, but the historical record demands otherwise. This game system is calibrated to reflect the historical pace of entire battles, not immediate tactical actions, unlike many other rules sets.

Prussians assault zouaves deployed in a strong position - this could end badly for them!

^ III. Playing the Game

The game is played in a series of turns. Each turn, every unit (infantry, cavalry, artillery reserves, and generals) may make one action. These are organized by initiatives: press the initiative button and it will pop up a box giving the initiative to either the French or Prussian side. That side may select one unit which has not used its action for the turn, and perform any legal action. This process is repeated until all units have performed an action. (Once one side acts with all units, the other side automatically gets the initiative.) Players must use an initiative if the game app gives them one, although they may always select which unit/general will act on it from among those who have not used their action for the turn. Players may wish to mark which units have acted during the course of the turn to make it clear which units have yet to go.

There are several actions available to players, not all of which require the use of the program:

> **Hold/Rest/Stand:** Any unit may choose to do nothing for a turn as its action. This does not require the use of the program interface.

Move General: A general may move up to 28 inches base movement, in any direction or combination of directions, subject to normal movement rules (as cavalry). This does not require the use of the program interface. Note that generals current position during the turn is the one used to determine whether they influence actions made to nearby units - they may influence a unit, then move to another, and influence it. They will influence all units nearby - there is no limit to this number.

Deploy: This changes a unit into a linear formation, taking advantage of available cover, etc., screened by skirmishers and supported by columns in reserve. Deployed cavalry units will be spread out in whatever formation is best suited to their protection, in available folds in the terrain, well-spaced out, etc. and is primarily a defensive measure, as their ability to fire is limited. A deployed formation is one base deep, with all bases sharing a facing, side-by-side (they may adjust the front slightly to follow terrain features such as walls). Guns are unlimbered and ready to fire. When deploying, a single base from the unit is selected as the reference point, and may shift its center up to 1 inch in any direction. It may change facing as desired. Other units are then deployed around it, in whatever directions the player wishes so long as the resulting formation is legal (see below). It is legal to re-deploy a unit which has already been deployed to reposition it. All units other than generals may deploy. The program interface must always be used, because there is a chance that transmission of orders may fail or be delayed. Only the Actor and Action fields need to be used for this action.

Maneuver: This represents the movement of a unit on the battlefield. For infantry and cavalry, it represents a set of smaller-unit columns, screened by skirmishers. For artillery, it is limbered movement in expectation of imminent action. Fire from a maneuver formation is less than that of a deployed formation. It is represented on the tabletop by a formation at least two bases deep, and (except for artillery) two bases wide. All bases are placed side-by-side, sharing a facing. For artillery, it is a formation only one base wide and two bases deep with the bases touching and sharing a facing. When performing a maneuver, facing may be changed as desired (the center-point of the unit front should not change during a facing change.) All units other than generals may maneuver. The program interface must always be used, because there is a chance that transmission of orders may fail or be delayed. Only the Actor and Action fields need to be used for this action.

Deployed Fire: When a unit is deployed, it may fire. This action cannot be performed by units in a maneuver or march formation, nor by generals. Targets must be within range and arc of fire (see Firing, below). Deployed fire may not involve any facing changes. The program interface must always be used to calculate the effects of fire. The Actor, Action, Target, Target Formation, Cover, Range, and Disordered/Outnumbered fields are all used for this action.

Advancing Fire: When an infantry, cavalry, or artillery unit is in maneuver formation, it may fire. This action cannot be performed by deployed or marching units, nor by generals. It represents fire by those units at the front of a maneuvering formation, and - in the case of artillery - the rapid unlimbering and firing of batteries with the ammunition supply immediately available. Targets must be within range and arc of fire (see Firing, below). Advancing fire may involve any facing changes as desired (the center-point of the unit front should not change). The program interface must always be used to calculate the effects of fire. The Actor, Action, Target, Target Formation, Cover, Range, and Disordered/Outnumbered fields are all used for this action.

Assault: This represents a charge into close combat. It may only be performed by infantry or cavalry units in maneuver formation. The target of an assault must be visible to the assaulting unit - facing changes are allowed before an assault is conducted (see Assaults, below). The target of an assault is considered to have used their action for the turn if the assaulting unit makes contact with them. The program interface must always be used to calculate the effects of an assault. The Actor, Action, Target, Target Formation, Cover, and Disordered/Outnumbered fields are all used for this action, but the Range field is not.

March: This represents the movement of a unit on the march, without the expectation of enemy contact. The unit will assume a march formation, one base wide. For artillery, this also includes a gap between the two bases of a base depth. All bases are placed back-to-front, sharing a facing. The formation may be made in any desired facing (the center point should not change). March columns get a benefit from marching on roads (see Movement, below). Fire from a march formation is not allowed. All units other than generals may march. The program interface must always be used, because there is a chance that transmission of orders may fail or be delayed. Only the Actor and Action fields need to be used for this action.

Route March: This is a march action made in those scenarios where a unit marches onto the tabletop. They are assumed to have already successfully received their march orders. Base moves are: Line Infantry - 12 inches; Guard Infantry - 14 inches; Landwehr/Mobilisé - 10 inches; Line Cavalry - 24 inches; Guard Cavalry - 28 inches; Landwehr/Mobilisé Cavalry - 20 inches; Artillery Reserves - 12 inches; Generals - 28 inches. The route march ends as soon as the unit performs any other action. Scenarios should specify where the marching unit is going on the tabletop. This action does not use the program interface.

Regroup: This represents the reorganization and rallying of troops. The regrouping unit must be disordered or demoralized. If successful, it may assume any formation/facing desired (the center-point of the unit front should not change). All units except generals may perform this action. The program interface must always be used, because there is a chance that the regrouping action may fail. Only the Actor and Action fields need to be used for this action.

An action is taken using the program interface by selecting the correct values for the necessary fields and clicking the Result button. One or more pop-ups will appear, some requiring answers to simple yes-or-no questions ("OK" is yes and "Cancel" is no). The results of the action will be provided in a pop-up, and changes should be made on the tabletop as indicated. A unit which has been the target of one or more Assault actions during a turn may have used its action for the turn, whether it has yet to perform another action or not (see Assaults, below).

Note that the only permissible action for a unit which is demoralized is to regroup.

If a mistake is made in using the program interface (if a needed field is set incorrectly), ignore the results and repeat the action with the correct values. If for any reason the program interface freezes, crashes, or is accidentally closed, simply re-start (re-open) the program interface and continue. No needed information will have been lost.
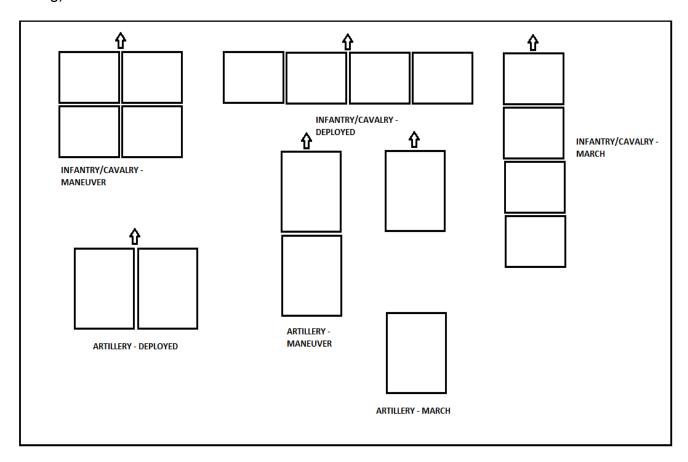
Multiple copies of the program interface may be used simultaneously during play. So long as players are in agreement about who is adjudicating what on which copy of the program, there will be no problems. Thus, there is no reason to wait for a single game master to adjudicate everything on one instance of the program. For small games this is not important, but it can help to speed play in larger, multi-player battles.

Uhlans maneuver forward, supported by the other arms.

^ IV. Formations and Movement

As described above, there are three different formations in this game. All units except for generals will always have a formation (generals have no formation). Typical examples of the three formations are shown in the diagram below (arrows indicate facing):

Note that, with the exception of two-base units in march formation, there is never any gap left between bases.

Deployed Formation: All bases sharing a facing, one base deep, arranged side-by-side. The line thus formed is allowed to bend to accommodate terrain features such as a wall, the edge of a woods, a ridge line, etc. Units assume a deployed formation only by performing a deploy action. Such an action may involve facing changes (see above). Once deployed, a unit may not move without its formation changing unless re-deploying (which is a new deploy action). A unit may not make deployed fire without first assuming a deployed formation.

Maneuver (or Advancing) Formation: When a maneuver action is made, the unit will immediately assume the maneuver formation, which is always at least two bases deep, but which may vary in width. Bases should be arranged in even ranks to the extent

possible (no rank may have more bases than the front rank, nor more than 1 fewer than any other rank in the formation). All bases share a facing. When assuming a maneuver formation, any desired facing may be used (center-point of the unit front does not change). When a maneuver action is taken, first the maneuver formation is assumed and then the move itself is performed. During this movement, any number of facing changes is permitted - the unit may freely turn as it maneuvers in any desired combination of directions. The movement will end with the unit still in maneuver formation.

The exception to the 2-deep rule above is when a unit has only 2 bases. Such units may choose to maneuver with their two bases side-by-side in a single rank, but should be marked as being in a maneuver formation.

March Formation: When a march action is made, the unit will immediately assume the march formation, which is always only one base wide, with the units bases arranged in a front-to-back fashion. Two-base units are the exception, where a gap is left in the column which equals a single base depth (this is notionally a third base). All bases share a facing. The column may bend ("snake") to follow roads or other terrain features being marched along. When assuming a march formation, any desired facing may be used (center-point of the unit front does not change). When a march action is taken, first the march formation is assumed and then the move itself is performed. During this movement, any number of facing changes is permitted - the unit may freely turn as it marches in any desired combination of directions. The movement will end with the unit still in march formation.

Note that units which are disordered or demoralized will retain their formation, and simply be marked as disordered or demoralized. Disorder and demoralization do not affect base movement distances.
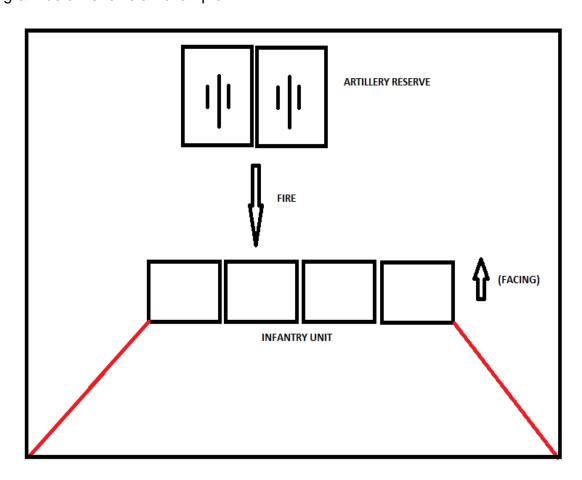
Generals have neither formation nor facing. Because they are neither targets nor actors in any combat situation, this does not affect game play. When they move, they do so as cavalry with a fixed base movement of 28 inches per turn. A general which is "run over" by the enemy simply moves immediately out of the way until at least 3 inches from any enemy unit if possible.

Any portion of a unit's base movement may be spent in an action involving movement (or none of it) but the base movement as adjusted for terrain may never be exceeded. Movement is made along a path specified by the moving player, measuring from the starting location of any base in the front of the formation to its ending location, up to the distance determined by a modified base move. Any rough terrain or linear obstacle crossed will adjust base movement: the greatest distance the movement path of any base in the formation spends crossing rough terrain costs twice the movement of crossing open terrain (for infantry or artillery) and four times as much (for cavalry). If I maneuver an infantry division across 2 inches of open ground, then through 2 inches of woods (rough terrain) it will cost my full 6 inches of base movement (2 inches for open ground, and twice 2 inches for rough). Linear obstacles (hedges, stone walls, etc.) will

cost an additional 1/2 inch of movement to cross. Choke-points (bridges, gates through insurmountable walls, etc.) will cost an additional 1/2 inch of movement to cross, unless the unit is in march formation. A maneuvering infantry unit passing over a bridge in open country will move a total of 5 1/2 inches, if it has a 6-inch base movement. Movement inside towns is considered rough for movement purposes unless a unit is in march formation (when it is considered to be road movement). Units in march formation will move 1.5 inches for each inch of base movement when they move along a road/through a town (a 50% movement bonus).

Movement through friendly units is allowed, so long as no part of the moving unit ends its turn "inside" another unit. Enemy units may not be approached closer than 1 inch (their "zone of control") by any part of a moving unit except as part of an assault action (see below).

Movement caused by combat results (falling back or pushed back) will abide by all normal movement rules. Such movement must be made away from the source of the combat result (the firing or assaulting unit) in as straight a line as possible and within an arc measured 45 degrees off either side of the rear edge of the affected (moving) unit. The unit being pushed back/falling back will retain its formation and original facing. The diagram below shows an example:

Here, an artillery unit faces an enemy infantry unit. Both units are deployed. The artillery unit makes a deployed fire action, causing the infantry unit to fall back 6 inches in disorder. The infantry unit would move within the arc described by the two red lines, a distance of 6 inches, without altering its facing or formation, and would be marked as disordered. It would not turn except as required for its movement to be legal (not within 1 inch of enemy units; not through impassable terrain; not moving so as to end up inside another friendly unit; etc.).

Other non-movement-related aspects of combat effects are addressed in the next section.

Making assault actions also involves movement. This is addressed under Assaults, below.

Note that there is a possibility that orders involving movement (deploy, maneuver, march, and assault actions) will be lost or delayed in transmission. Having a general within 6 inches of the unit receiving the order helps to prevent this from happening (the general is 'on hand' to make sure thing go as planned). When orders are lost, it is still possible to make actions which do not involve movement (fire actions, regroup, etc.).

^ V. Unit Status and Combat Effects

Unit Status: There are three unit statuses: OK/Normal, Disordered, and Demoralized. All units begin the game with an OK status, and will retain it until combat effects cause the status to change. Disordered and demoralized units may make regroup actions. Once successfully regrouped, a unit returns to its OK/Normal status. Disorder indicates that a unit has suffered some losses, and that it is not responding optimally to command control among and within its units. Demoralization is more severe, indicating further losses and a greater degree of breakdown within the unit. A disordered unit may still function - a demoralized one is no longer functional, but it has not yet broken (broken units are considered destroyed and are immediately removed from play).

Disordered units may make any legal action (although the Actor Disordered box should be checked if needed when they do so). Disorder makes a unit more vulnerable in combat situations. When firing at or assaulting a disordered unit, the Target Disordered/Demoralized box should always be checked.

Demoralized units are not permitted to make any action other than regroup. They will fight if assaulted, but will not benefit from coherent defensive fire. (This makes them the ideal candidates for assaults, especially frontal assaults.)

When a unit has become disordered, it may sometimes receive an additional disorder from a subsequent enemy combat action or other action. When this happens, the two disorders add up to a demoralized status. Once demoralized, a unit will not become further disordered or demoralized (or destroyed/broken) - they will simply remain demoralized until they successfully regroup or are otherwise removed from play.

In some cases, combat effects will involve involuntary movement (pushed back, thrown back, falling back, etc.). Such movement will be governed by normal movement rules, as described above. In cases where such movement may not be legally completed (ie, the affected unit is surrounded by enemy units, or is backed up against impassable terrain) the unit will surrender to the enemy - it is considered destroyed and is removed from play. If a combat effect does not specify movement, then the unit will retain its facing and formation in the position it currently occupies. This movement is made immediately when the combat outcome is reported for the unit.

It should be noted that retreats and withdrawals are sometimes absolute (6 inches or 12 inches) and sometimes expressed as "up to" a specified distance. In this latter case, the unit being affected will attempt to make a legal move which will lessen or remove its vulnerability to the source of fire causing the combat outcome. There is no requirement that it must be successful - it will not surrender - but it must attempt to be as successful as possible.

In some cases, combat effects will specify location. These both occur with assaults: sometimes, an assaulting unit will refuse to enter into combat contact with its target, and will stop 1 inch short of it. The unit will be faced along the line of movement of the assault (see below) and will be positioned, in a maneuver formation, 1 inch from the target unit. In other cases, a unit may be pushed back to its starting position. In this case, the unit will remain in maneuver column, facing along the line of movement of the assault. In both cases, disorder or demoralization will be marked, according to the combat effect.

Losing Bases: Some combat effects involve the loss of one or more bases. This indicates that the unit has sustained severe losses through combat. Lost bases are immediately removed from the affected unit. If at any time a unit loses half or more of the bases with which it started the game, it is considered destroyed and is immediately removed from play. Thus, 2-base (and smaller) units are immediately destroyed if they receive such a combat effect.

For both fire actions and assaults, an acting unit or its target may be considered outnumbered. This happens in several cases, and is handled as described in the Fire and Assaults sections below.

Deployed French infantry can be a real challenge, especially if they are North African veterans like these!
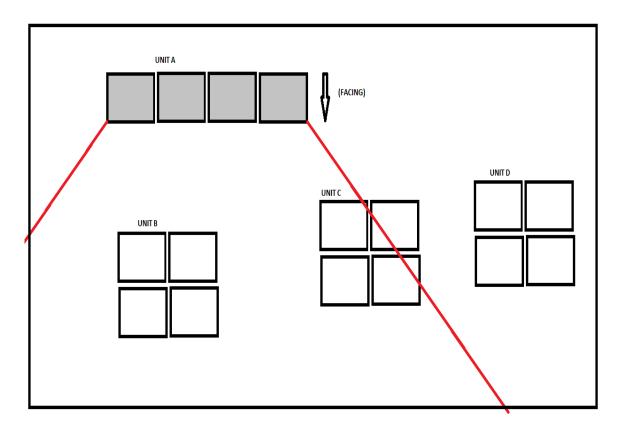
^ VI. Fire

Fire actions include deployed fire and advancing fire. Deployed fire may only be made by units in a deployed formation. Advancing fire may only be made by units in a maneuver formation. Deployed fire is significantly more effective than advancing fire, because more of the unit's battalions, squadrons, and batteries are in a position to fire (in linear formations and/or skirmishing or unlimbered), and will be positioned to have the best possible fields of fire.

Cavalry units were not consistently armed with rifles (only dragoons and light cavalry, not uhlans or cuirassiers or other heavy cavalry, although some formations acquired then as the war progressed), and even when they were these were usually carbines, with a shorter range than infantry rifles. When accompanied by horse artillery, these would most often be single batteries. This means that cavalry will generally have little effect when firing, even when deployed. (The cavalry commanders of the day often felt that it was the business of cavalry to charge with the sword or lance, and that they should not be armed with rifles at all. European observers of the American Civil War started to promote the view that cavalry should act as mounted infantry, and needed only rifles and pistols, and not swords or lances at all. This was a huge debate within European military circles, but there are relatively few instances of cavalry acting as mounted infantry in the Franco-Prussian War, and never at a regimental scale.)

The formation of a target unit is also important for fire actions: when a unit is deployed, it is less vulnerable to fire. When a unit is in maneuver formation, it is more vulnerable to fire. A unit in march formation is the most vulnerable to fire.

The targets of fire actions must be within the range of the firing unit (3 inches for Prussian infantry and all cavalry, 6 inches for French infantry. 9 inches for French artillery, and 12 inches for Prussian artillery). The program interface will inform you if you attempt to fire at a target which is out of range. You are still considered to have made an action when you receive an out-of-range fire effect - the unit cannot make another action that turn. Targets of fire must be visible to the firing unit, and they must be within arc of fire. Visibility is determined by a clear line of sight (LOS). Some terrain will block LOS, and some terrain will permit fire over the heads of friendly units under certain conditions (see Terrain, below). Visibility into and through woods (and similar terrain) penetrates only 3 inches, limiting fire within woods to this range. Targets of fire must be at least partly within an arc of fire going forward and outward 45 degrees from each of the front corners of the firing unit, as shown in the diagram below:

In the diagram, we have a deployed firing unit (Unit A) and can see its firing arc - the area between the red lines. All of the three nearby enemy units (Unit B, Unit C, and Unit D) are within the firing range of Unit A, and there is a clear LOS from Unit A to each of them. Unit B is completely inside the firing arc, and is a legal target. Unit C is also a legal target, because it is partially inside the arc of fire. Unit D cannot be fired on, because it is outside of the firing arc. If we were looking at an example of advancing fire,

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the firing unit could adjust its facing in place to bring a desired target unit inside of its firing arc.

You are not permitted to fire along a line-of-sight which goes through or closer than half an inch to friendly troops, unless you are firing over their heads (see Terrain, below).

Note that assaults also involve fire combat, but this is computed by the program as part of the assault. It does not require any separate action on the part of players.

Whenever the firing unit has more or fewer bases than the target unit, then the Outnumbered boxes must be used. Check the "Actor Outnumbered" box if there are more bases in the target unit than in the firing unit. Check the "Target Outnumbered" box if there are more bases in the firing unit than in the target unit. If the firer and target are equal in number of bases, leave both boxes unchecked.

Artillery provides an exception to this rule. For a firing artillery unit, add up the number of bases in that unit plus the number of friendly artillery bases which have already fired on the same target unit during the turn. This provides a cumulative effect, where artillery increases in effect as more and more units share the same target. This does not apply to the fire of any other units.

The effects of fire are described in the sections above.

The key to Prussian victory - better artillery!

^ VII. Assaults

Infantry and cavalry units in maneuver formation may make assault actions. This represents the close-range fire and hand-to-hand combat which sometimes occurred during the Franco-Prussian War. The biggest danger to an assaulting unit is the

defensive fire which is likely to be made by a defender. This can be mitigated by choosing a target unit which is disordered and by not making a frontal assault (that is, an assault through the target's arc of fire). Even so, assaults can be dangerous. Best is to assault a unit which is demoralized - demoralized units will fight but do not organize coherent defensive fire against a charging opponent. Targets in march formation are also a good choice. Cavalry - while it has little firepower - is excellent at close-quarters fighting in open terrain.

When making an assault, there must be a clear LOS to the target unit and it must be at least partially within the firing arc of the assaulting unit. The target of an assault must be within 6 inches (base movement) for assaulting infantry units and 12 inches (base movement) for assaulting cavalry units. These distances are modified by terrain just as movement is, made along a straight path between the center front of the assaulting unit and the nearest part of the target unit (the "assault path"). The target unit must be within the modified distance. For assaults where orders are delayed, the same process is used but the distance is reduced, as indicated by the program interface. A frontal assault is any assault which crosses the firing arc of the target unit, as determined by the assault path between the two units.

Assaults may not "go home" - that is, the assaulting unit may be stopped by fire before making contact with the target unit. Any assault in which the assaulting unit is forced back to its starting position, or stopped 1 inch from the target unit, is a charge which has not "gone home." In this case, the assaulting unit will have used its action for the turn, but the target unit - if it has not already acted for the turn - may still make an action. If a charge goes home - that is, defensive fire does not stop the assaulting unit 1 inch away, or push it back to its starting position - then both the assaulting and target units have used their actions for the turn (they are occupied by the close combat and its aftermath). In this case, the assaulting unit is moved along the assault path into contact with the target unit of the assault, before any combat effects take place (which might push the target unit back). Note that in cases where the assault goes home but is defeated in close combat, the assaulting unit may not actually need to be moved (eg, it moved forward 6 inches into contact and was pushed back 6 inches). Notionally it still moves, however.

The Outnumbered check boxes are used slightly differently in assaults than they are for fire. In an assault, the target is outnumbered if the total number of bases of all units which have assaulted the target that turn, at the time they made the assault, are greater than the number of bases in the target unit. To give an example: I have a French infantry division of four bases which is assaulted by a Prussian infantry division of four bases. Neither actor nor target is outnumbered for this action - both have four bases. If there is another assault during the turn on the same target unit, all four of the bases from the first assault are counted (even if the first assaulting unit lost bases as a combat result) when calculating outnumbering for the second assault. Thus, a second assault made by a three-base Prussian Infantry unit would outnumber the four-base French unit, because it adds the number of bases of the first assault (4) to its own number of

bases (3) to get 7, which outnumbers the target unit's 4 bases. A third assault would add all 7 of the bases from the preceding assaults to its own total.

Unlike fire, the combat effects of assaults may affect either or both of the participants. These effects are described in the preceding sections.

[^](#) VIII. Terrain

Terrain can have a huge effect on play, influencing movement and providing cover. Terrain may also permit or stop potential fire and assault actions by blocking the line of sight (LOS). Scenarios should specify the characteristics of all tabletop terrain before play begins.

Movement: There are several types of terrain from a movement perspective: open terrain, rough terrain, impassable terrain, roads, linear obstacles, and choke-points. Open terrain is typically fields - ground which does not impede movement. Rough terrain can be woods, swamps/marshland, rocky hills, or similar types of features. It slows movement by half for infantry and artillery and by three-quarters for cavalry and generals. Impassable terrain cannot be entered or crossed - it consists of such things as cliffs, deep swamps, and unfordable rivers.

Roads are "improved" roads (that is, metalled ones) and not just dirt tracks. They speed the movement of marching units by half. Linear obstacles are walls, hedges, and other obstacles that must sometimes be crossed. They will cost a penalty of a half inch off of base movement for units which cross them (note that, while individual mounted horsemen can easily jump some linear obstacles, entire cavalry divisions generally cannot!) Choke points are bridges, gates through otherwise impassable walls, and similar points where movement is constricted. These cost a half inch of base movement to pass, unless the unit is marching. Note that many such choke-points are also roads (bridges, for example). Towns are a special category of terrain. For units marching, they act as roads. For other formations and types of movement, they count as rough.
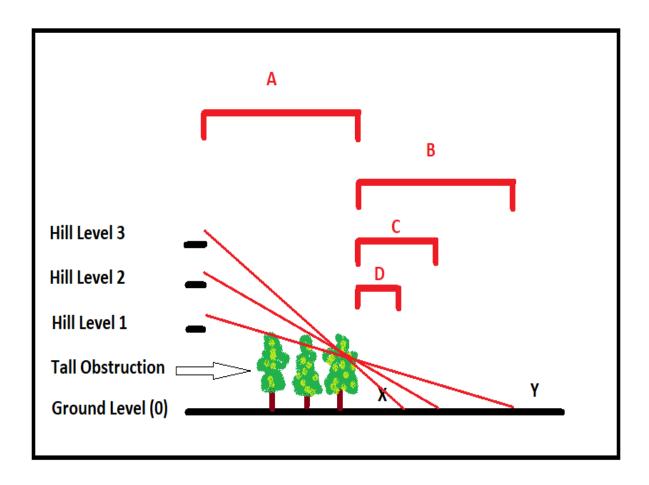
Cover: Terrain can also provide cover for fire and combat purposes. Open terrain does not provide cover, nor does the type of rough terrain (such as swampy ground) where there is not much above ground level to provide protection from prying eyes or bullets. Fords across rivers are an excellent example - they impede movement, but do not conceal or protect those crossing them.

Soft cover is that type of cover which serves to conceal troops - the typical example is woods. During the Franco-Prussian War, most fire was aimed fire, and it assumed that the target was visible to those firing. It was not until the Great War that area fire with machineguns or artillery fire onto a set of map coordinates became commonplace. Other types of cover also act as soft cover: villages may consist of structures made of softer materials which will not stop bullets (wooden barns/houses/sheds); and many types of hedges and fences will conceal but not provide the degree of cover which will stop a bullet or shell.

Hard cover includes stone walls, the solid buildings of stone or brick found in towns, and naturally protective "soft" areas which have been fortified (fortified villages, for example). It also includes prepared trenches. (The French infantry of the period were equipped and trained to dig rifle pits in a matter of 25 minutes - these do not count as prepared trenches, only hasty ones, and are factored into a unit using a deployed formation. They do not count as cover. For game purposes, trenches would require a longer period to prepare, and would often be combined with more serious fortifications for artillery, etc.) Fortifications include redoubts and fortresses - places where engineers have designed and built military fortifications. (In many places in Alsace/Elsass and Lorraine/Lothringen cities held medieval fortifications which were then improved by Vauban-era ones, which were updated/used in the Franco-Prussian War, and then further fortified for the World Wars. Metz is an example of this. A lot of fighting got done in this part of the world over the centuries.)

Line of Sight (LOS): Terrain also acts to obstruct line-of-sight. To determine LOS, a line must be drawn from any point on a base of the spotting unit to any point on a base of the unit being spotted. Ranges for fire in this game are calculated as the shortest clear LOS between the firing unit and its target (round down if they are on a break-point measurement such as 3, 6, or 9 inches). If the potential LOS crosses any terrain, it may be blocked. There are rules for determining what can and cannot be seen.

For this purpose, terrain is classed according to a series of levels: ground level, low obstructions (hedges, walls, wheatfields, etc.), taller obstructions (houses, woods), low hills, taller hills, even taller hills (etc.) - each level of hill is a "terrain level." For Franco-Prussian War purposes, we will not generally see more than two or three terrain levels on the battlefields (there are lots of hills and ridgelines in that part of Europe, but it is not mountainous like the Alps. That said, the Grand Ballon in the Vosges is at 1424 meters, but there was no fighting there in the Franco-Prussian War that I know of. In earlier and later periods, the Vosges saw a considerable amount of combat). Terrain in all of these different height categories may be found on the tabletop. The rule for LOS is that if you can see them, they can see you - it works in both directions. Low obstructions may provide soft or hard cover to troops immediately behind them, but do not block LOS. Taller obstructions such as houses and woods will block line of sight across the same terrain level, but may not block LOS from higher levels, according to a more complicated system: at one terrain level up, your LOS will not be blocked if tall obstructions are closer to you than they are to the target. For each terrain level you go up, half of the area blocked from the level below becomes visible. See the following diagram:

For aesthetic reasons, our figures and terrain pieces are not in agreement with the ground scale. Thus, what we see on the table is not how it really is. This system gives you a way of approximating reality. (Short of going and surveying critical vistas on the battlefield, or having a really good 3-D model, you won't get better than an approximation. There are wargamers who have visited and surveyed important battlefields, but from a practical perspective this is not an option for most of us.) In the diagram, we have hills on the table up to 3 terrain levels tall. We also have a tall obstruction (woods).

- If we have a unit on the first terrain level trying to spot a unit beyond a tall obstruction on the ground level (X, Y) we calculate the "shadow" cast by the tall obstruction as follows: Measure the distance from the spotter to the far side of the tall obstruction (A). Anything beyond the tall obstruction that distance (B, where A and B are equal) or less is hidden (X), and anything more than that distance beyond the tall obstruction can be seen (Y).
- If we go up two terrain levels above the tall obstruction, we do the same calculation, but we divide the shadow of the level below in half. Thus, distance between spotter and obstruction (A) is divided by 2, giving us the length of the shadow (C). Anything in the shadow (X) is hidden, and anything beyond it (Y) is visible.

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- If we go up 3 levels, we do the same thing: this time, we divide the distance between spotter and obstruction by 4, giving us a shadow of half that (D) of the level below (C). We can still see Y (beyond the shadow) and we still can't see X (inside the shadow).

If you have more than one tall obstruction between you and the target you want to spot from above, and the obstructions are on the same terrain level below you, always check the one closest to the target. If that one isn't a problem, none of the others will be. Note that model hills for wargames are often stepped, to allow figures to stand on them at different levels. Often, these are meant to represent sloping hills rather than a series of stepped plateaus. The scenario should specify the nature of hills, so they are interpreted correctly during play.

The same system is applied to firing over the heads of friendly units. Treat the friendly units as a tall obstruction: if the target would be visible (according to LOS rules) then you are allowed to fire on it.

This is a little complicated, but it is important to any simulation of the Franco-Prussian War. In the early battles, the French took care to deploy in "positions magnifique," which sometimes positioned their artillery on hills above their infantry lines. Once you get used to it, it starts to become obvious.

^ IX. Generals and Regrouping

Generals have few functions in this game, but they can be important. The first is to help guarantee that orders are received and obeyed without delay. They do this by being within 6 inches of the unit being given the order. This does not apply to fire orders - the divisional commanders would know to fire on the enemy troops without orders from above. The second function of generals is to help regroup disordered and demoralized units. Again, they do this by being within 6 inches of the unit which is regrouping.

Generals cannot make any combat actions, nor may they be the target of combat actions. Their only actions are to move and to rest. They influence their troops via their proximity. Note that generals will influence any number of units during the turn, within which they are in proximity, and that they may move during the turn to bring new units into range of their influence.

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Generals which are "run over" by enemy movement will get an immediate, free move consisting of a minimum distance which will take them to safety: at least 3 inches from any enemy formation.

X. Game Notes

This game system focuses on the early battles of the war - the "Imperial Phase." Because of the very high-level approach taken, the regularity of the French army organization (which became much more variable during the Republican Phase of the war) makes this a natural fit. The early war is also when most of the larger battles occurred. For those gamers interested in this phase of the war, I strongly recommend the work of Lieutenant-Colonel G.F.R. Henderson. He was a British officer of the period who had made a very close study of the battles of Spicheren and Wörth, and penned books of the same names ("The Battle of Spicheren" and "The Battle of Wörth"). They were republished by Helion & Co in 2009, and are available from Amazon and many other sellers. Both books provide an incredibly insightful view of how the nature of warfare was changing, from an officer who was not only an excellent scholar but also a renowned military theorist of his day. He was focused on training officers for the changing style of warfare he foresaw, and his work is very practical as a result. These books are full of the kind of detail which you need if you are to create good tabletop scenarios for any Franco-Prussian ruleset.

La Guerre à Outrance tries to depict the fundamental difficulties faced by the army-level commanders of the conflict: breech-loading firepower had become simply overwhelming, as had artillery. If the French stand on the defensive in well-chosen positions, they are very difficult to beat. One can easily understand why the Prussians suffered such heavy casualties in the early battles. If the French high command had been more capable, I think it is easily possible that the Prussians could have been defeated. As it was, commanders on both sides made some major mistakes. Given the changed nature of warfare, this is hardly surprising.

In the game, it is crucial for the Prussian player that the French infantry units be pounded into submission before assaults are launched against them. The superior artillery of the Prussians is a necessary ingredient in this equation. This dynamic, more than anything else, informs how battles are won or lost in this system. Any assault against deployed French infantry which has not been demoralized runs a serious risk of failure. The way this is handled in this game may seem extreme to wargamers who are more used to Napoleonics or the American Civil War, but I believe it to be an accurate representation of the dynamics of the Franco-Prussian battlefield.

Elements of the "what if" are preserved in this system. I am philosophically opposed to games where the stupidity and incompetence of historical commanders is enforced by the rules of the game, and yet some simulations of the Franco-Prussian War (especially board-games) do exactly that. Should I be made to employ historical tactics and doctrine? Yes. Should I be able to change the indecision and incompetence which cost France the war? Yes! I want to be able to play a game where I can show those Imperialistic Prussians what they'll get if they tangle with a *real* man's army of ~~disorganized alchoholics~~ well-dressed, fearless Frenchmen! I have tried to allow some of the failures of the commanders on both sides of the conflict to be rectified by players,

but to allow it to happen only within the bounds of the organization, equipment, training, and doctrine the armies possessed historically.

Players should note that the "Prussian" army is in fact not entirely Prussian by any means. In Germany it is referred to as the "German" army, which, considering the many different states who supplied troops, is only fair. That they were lead by Prussia is true - they also used a military system developed by the Prussians. Napoleon III had hoped for defection among the south German states, but they all rallied to Bismarck's cause fundamentally because they *were* German. Nationalistic identification with the idea of Germany - as opposed to the Grand Duchy of Baden or Mecklenberg-Schwerin, or the Kingdom of Bavaria or Saxony, (etc.) - had been a revolutionary idea - and a major cause of turmoil - in the Germany of 1848. By 1870 it was an idea coming of age. Were the term "Prussian" not so widely adopted in the English-speaking world, I would be tempted to use the term "German" instead.

As a computer-assisted system, I have long wanted to produce a game where the computer - while not perhaps utilized as fully as in other game systems for record-keeping and so on - could be employed in a less-intrusive, minimalist fashion. By reducing what is a set of screens in other computer-assisted systems to a single one which can be run on a number of devices at the same time, it attempts to solve some of the usability problems which face this type of game. *La Guerre à Outrance* allows what would be a very heavy load of chart look-ups and dice rolling to be reduced to the click of a button, while not usurping the function of the tabletop itself as a way of keeping track of the battle. In this way, it avoids some of the difficulties faced by computer-assisted systems which handle more of the game mechanics inside the machine. Ultimately, it allows for a "chess-problem" approach to historical miniatures: a game which by definition must play suitably fast. The same level of detail would not have been easily possible with a paper-and-dice fast-play system, even though that may be what the gamer sees on the table.

I hope gamers enjoy *La Guerre à Outrance* in the intended spirit!

    Arofan Gregory, July 2020