

Brief Outline of Part II

Part II - The Structure of the 1941 Soviet and Axis Resource Database

Part II is focused on how to create a resource database for the weapon systems and organisations that made up the Soviet and Axis forces during 1941. It sets out the mathematical basis behind the resource database, drawing on applied physics and statistics. Although the methodology is generic (it can be applied to any weapon system or organisation), the focus is on technology from the first half of the twentieth century, and primarily on weapons and organisations from WWII.

Chapter II-1, The Database Resolution Level

The first chapter in Part II is concerned with defining what database resources are, determining the highest practical database resolution level that can be realistically simulated (for example, addressing whether to simulate individual small arms), and selecting an appropriate yardstick on which to base the analysis.

Chapter II-2, Methodology for Calculating a Weapon System's or Database Unit's Overall Combat Power Coefficient (OCPC)

Chapter II-2 presents the complete methodology relating to calculating a weapon system's or database unit's Overall Combat Power Coefficient (OCPC). The OCPC is a measure of the inherent lethality of the weapon system or other database unit type. The lethality of the weapon or database unit is defined as "the inherent capability of a given weapon or unit to kill personnel, or to make material ineffective in a given time period". Note this capability is inherent in the weapon or unit, and is independent of a force's training and deployment (which is considered separately in Part III of this book). The reasoning, methodology and mathematics, relating to calculating Weapon Combat Power Coefficients (WCPCs) and OCPCs, are detailed for three main types of weapon system and database unit. These are:

- Non-mobile weapon systems or squads. These include weapons that are stationary, towed, or carried weapons, with no inherent motorised mobility.
- Land based motorised Mobile Fighting Machines (MFMs)
- Aircraft.

It should be noted that the reader does not need to be a physicist or applied mathematician to understand this chapter. All relevant terms and concepts are explained, with all relevant weapon performance graphs and tables included for illustration purposes.

Chapter II-3, Methodology for Calculating a Weapon System's or Database Unit's Specific Combat Attributes

Chapter II-3 relates to taking the methodology in the previous chapter and using it (with some additional data) to establish a weapon system's or database unit's specific combat attributes. These are the generic attributes useful in any military simulation, and they can be used in any combat model used by the military simulation. Examples of the specific combat attributes considered are: Relative Anti-Personnel Value (APer), Relative Anti-Armour Value (AT), Relative Anti-Aircraft Value (AA), Relative Fortification Destruction Effect (FDE), Relative Armour Defence Strength (ARM), Relative Assault Defence Strength (ADS), Relative Overall Mobility (MOB), Supply Demand Factor (SDF), and Effective Combat Ranges (R). Refer to the table of contents for Part II-3 for a complete list of the specific combat attributes considered.
