



Background

- Armor refers to combat vehicles, protected by armor and generally armed, which combines operational mobility with offensive and defensive capabilities. They can be wheeled, tracked or a combination thereof.
- War wagons were medieval armor developed around 1420 by undefeated Hussite general Jan Žižka in Bohemia. Heavy wagons with protective sides and firing slits were manned by 16-22 soldiers armed with crossbows, handguns (*píšťala*, a Žižka innovation), pikes and flails. He invented field artillery by mounting cannon (*houfnice*) on carts in between the wagons.



 The first armed car was developed in 1898 (right). Armored cars mounted with machine guns followed in 1899 (left). Armored cars were widely used in WWI as scouting vehicles.



• Britain and France developed the tracked tank to break the stalemate on the Western Front. In 1915 the British produced their first prototype tank, and used tanks for the first time at the Battle of the Somme in September



1916. They produced about 2,600 tanks of varying types during the war.



- The French pioneered the use of a 360° rotating turret with the Renault FT light tank in 1916. Its engine was located at the rear. By late 1918, 3,000 FTs had seen action.
- Battlefield success and improved technology brought armor applications in other areas, such as troop carriers (1917), self-propelled artillery (1917), and SP anti-aircraft weapons.

- After WWI, the Allies tended to focus more on cost-cutting, theory and inter-branch rivalry than on learning lessons from WWI.
 - -A few champions argued against Infantry control of tanks and for new armor tactics and equipment, including Patton and Eisenhower.

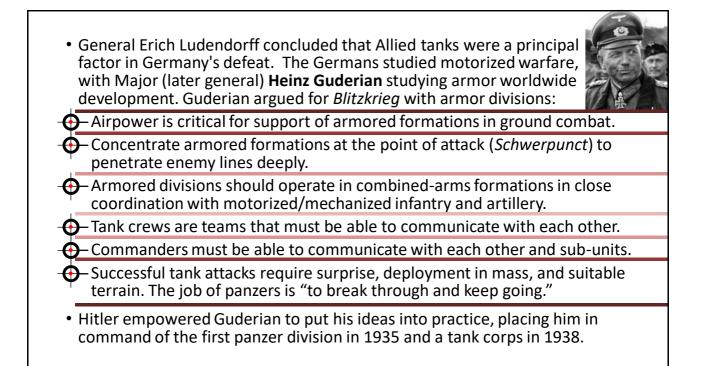


the flying tank



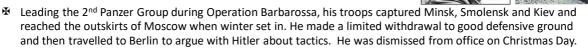
Combatting the new combined-arms concept the flying anti-tank gun

- France did build up its armor, and was ready to fight WWI all over again.



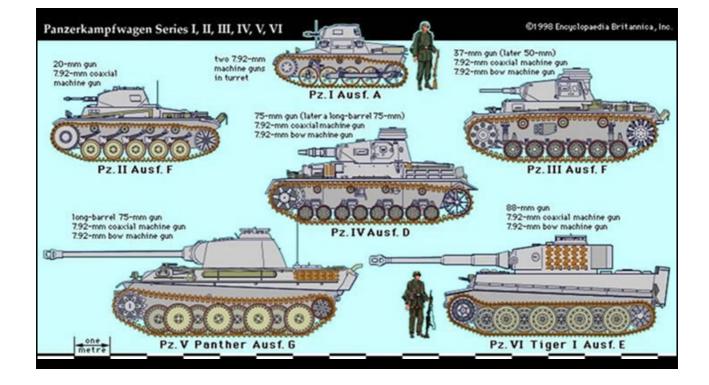
ACHTUNG-PANZER!

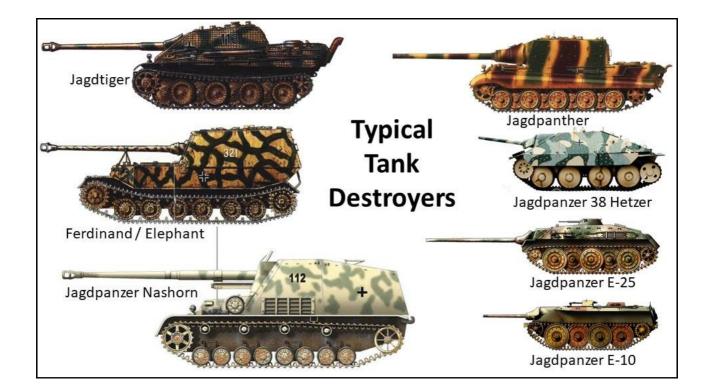
- ✤ Heinz Guderian was a communication specialist in the Signal Corps in WWI. He was selected to remain an army officer allowed by the Treaty of Versailles. In 1922, he was appointed Inspector of Motorized Troops. He studied the experience of tanks in WWI and was employed as a teacher of tank tactics.
- Commanding a motorized battalion in 1930, he organized his companies into a tank scout company, a tank company and an anti-tank company. He also developed a radio-communication system for all tank officers.
- ✤ He took over the 2nd Panzer Division in 1935 as a colonel. Three years later he was a lieutenant-general and Chief of the Mobile Corps.
- ✤ He led the Blitzkrieg of Poland in September 1939 with surprising success.
- ✤ He led the 1940 attack on France, crossing the Meuse River in 2 days. Ordered to wait for the Infantry 12th Army to catch up, he threatened to resign.
- ✤ Reinstated by Hitler, his panzers captured Boulogne on the English Channel in ample time to prevent the British Expeditionary Force evacuation from Dunkirk, but was again ordered to halt because the Infantry couldn't keep up.



- ✤ After Germany suffered further losses at El Alamein and Stalingrad, Guderian was again reinstated as commander of the Armored Troops, but the tide had turned and he was defeated at the Battle of Kursk.
- ✤ He was appointed Chief of the General Staff, but continued to argue with Hitler over strategy and was finally dismissed on 28 March 1945. Captured by the US Army in May, he was released in 1948 and died in 1954.













Battle of the Bulge

The Allied Position

After the breakout from Normandy and the Allied landings in Southern France on 15 August 1944, the Allies advanced toward Germany more quickly than anticipated, facing several military logistics issues:

- troops were fatigued by weeks of continuous combat
- supply lines were stretched extremely thin
- supplies were dangerously depleted.

General Eisenhower and his staff chose to hold the Ardennes region which was occupied by the U.S. First Army. The Allies chose to defend the Ardennes with as few troops as possible due to the favorable terrain (a densely wooded highland with deep river valleys and a rather thin road network) and limited Allied operational objectives in the area.

Allied intelligence indicated that the Wehrmacht was using the area across the German border as a rest-and-refit area for its troops. The Allies found a peaceful part of the forest to place exhausted veteran and newly arrived units.







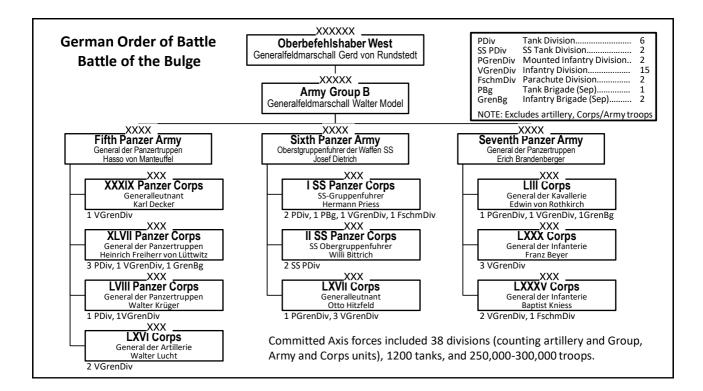














German deception operations

- The operation name, Watch on the Rhine, was a diversion.
- Troop movement and preparations were disguised (e.g., movement at night, Axis planes flew over to mask noise, etc.).
- Germans communicated by landline or courier, not radio (Ultra).
- Germans ordered to prepare for Allied invasion in Cologne and Bonn.
- Selection of "impassable" Ardennes Forest for attack (re 1940 attack).
- Attack using weather (snow, fog) to keep Allied air grounded.
- Operation Greif: Disguise English-speaking soldiers as Yanks to spread confusion and terror by sabotage (e.g., cut phone lines, switch road signs), capture and use of US tanks, act as MPs, etc.

