

THE PRINCIPLE OF ACTIVE DEFENSE HAS BEEN THE KEY TO GERMAN TACTICS ON THE EUROPEAN FRONT. THE PURPOSE OF ASSAULT-UNIT OPERATIONS IS TO PLACE AN ALLIED FORCE ON THE DEFENSIVE, IF ONLY TEMPORARILY, AND DURING THIS PERIOD TO SUBJECT IT TO LOSSES OF MEN AND MATERIEL WHICH MUST BE COMPENSATED FOR AT THE EXPENSE OF ITS ATTACKING UNITS. USING INFORMATION OBTAINED FROM RECONNAISSANCE, FROM CAPTURED MAPS, WEAPONS, AND OTHER MATERIEL, AND IF POSSIBLE FROM ALLIED PRISONERS, GERMAN INTELLIGENCE INFORMS THE COMMANDER OF AN ASSAULT UNIT ABOUT THE INTENTIONS, STRENGTH, ORGANIZATION, COMPOSITION, AND FIGHTING QUALITY OF THE OPPOSITION. ESPECIALLY, TWO TYPES OF COMMISSIONS ARE PRESCRIBED FOR ASSAULT UNITS: DESTRUCTION OF SPECIALLY SELECTED ALLIED POSITIONS AND THE PERSONNEL OCCUPYING THEM, AND DESTRUCTION OF ALLIED UNITS WHICH HAVE PENETRATED GERMAN DEFENSIVE POSITIONS. HOWEVER, IT IS POINTED OUT THAT THERE ALWAYS ARE OPPORTUNITIES FOR ASSAULT UNIT OPERATIONS. IN EACH INSTANCE, CAREFUL CONSIDERATION IS GIVEN TO THE QUESTION OF WHETHER THE EXPECTED SUCCESS IS WORTH THE COMMITMENT OF TRAINED ASSAULT TROOPS. "WEAK POINTS IN THE ENEMY FRONT ALWAYS CAN BE FOUND, AND THESE MUST BE EXPLOITED FOR ASSAULT-UNIT OPERATIONS," ACCORDING TO GERMAN COMMAND. IN HAVING FOUND CERTAIN BASIC FIGHTING PRINCIPLES, QUALIFIED MEN BE ORGANIZED INTO ASSAULT UNIT DETACHMENTS, AND BE TRAINED IN THE LIGHT OF PAST EXPERIENCE. NO STANDARD ORGANIZATION IS PRESCRIBED, BUT IT IS MENTIONED THAT EACH DETACHMENT SHOULD CONTAIN A BALANCED COMPLEMENT OF INFANTRY MEN, ENGINEERS, SQUADS, SIGNAL PERSONNEL, AND MEDICAL PERSONNEL. (OTHER REGENTS ARE INCLUDED, NOT ONLY TO TAKE BACK THE CASUALTIES, BUT ALSO TO BRING CAPTURED EQUIPMENT). IT IS POINTED OUT THAT HEAVY INFANTRY WEAPONS MAY COOPERATE TO ADVANTAGE, AS MAY ARTILLERY. THE FOLLOWING EQUIPMENT IS USUALLY USED: BRENCH KNIVES, SHARP SPADERS, HAND GRENADES, PISTOLS, COMBINE PISTOLS (THE SLIP CONTAINING 24 ROUNDS ONLY), VEPRY PISTOLS, TELLERMINES, POLE CHARGES, SMOKE GRENADES, POLE CHARGES, ETC. RAISING PARTIES ARE CALLED UP AS AN ASSAULT UNIT DETACHMENTS AS MAY BE NECESSARY. HOWEVER, THE GERMAN EMPHASIZE THAT THE COMMISSION OF SUCH A PARTY MUST NOT BE TOO PURSUITIVE. "OPPORTUNITIES THAT ARISE IN THE COURSE OF THE VENTURE SHOULD BE EXPLOITED TO A LIMITED EXTENT BY THE ASSAULT-UNIT COMMANDER" CONCEDES THE HIGH COMMAND. THEY FOLLOW THIS VERY SIGNIFICANT OBSERVATION: "FEINTS LAUNCHED AT THE TIME OF THE MAIN OVERTHROW CRUSH OUT THE ENEMY AND CAUSE HIM TO TAKE WRONG ROYSTER EXPOSURES."

BEFORE ASSAULT-UNIT OPERATIONS, ALLIED POSITIONS ARE CONSTANTLY OBSERVED AND PERIODICALLY RECONSIDERED. IN DECIDING UPON A COMMISSION, THE GERMAN NOT ONLY TAKE INTO ACCOUNT THE ALLIED STRENGTH AND ARMAMENT IN INDIVIDUAL SECTIONS, BUT ARE STRONGLY INFLUENCED BY WHAT GERMAN INTELLIGENCE HAS REPORTED, REGARDING THE STATE OF ALLIED OPERA IN THE VARIOUS SECTIONS. TERRAIN ESTIMATES ARE SOUGHT CAREFULLY. FINALLY, A DECISION IS REACHED AS TO WHETHER THE ASSAULT UNIT WILL MAKE A STRIKE ATTACK, PURELY IN INFANTRY IN CHARACTER, BASED ON SURPRISE, SPEED, AND THE EXPLOITATION OF NEGLIGENCE OR FLY; OR WHETHER THE UNIT WILL TRY TO PENETRATE ALLIED POSITIONS WITH THE ASSISTANCE OF HEAVY WEAPONS. THE CHOICE BETWEEN THE LATTER TWO TYPES DETERMINES THE TACTICS AND TIMING OF THE OPERATION.

AN INFANTRY ASSAULT BASED ON SURPRISE, AND NOT EMPLOYING ARTILLERY SUPPORT, IS REGARDED AS THE MOST PRACTICAL WAY TO CAPTURE PRISONERS. USUALLY BETWEEN THE HOURS OF DARKNESS AND 3:00 A.M. IS THE TIME THESE ASSAULT

THESE CONDITIONS AND THE PROXIMITY OF WOODED AREAS GREATLY INCREASE THE NECESSITY FOR ALERT OBSERVATION POSTS, LISTENING POSTS, AIR OBSERVATION POSTS, AGGRESSIVE ATTACKING AND DEFENSIVE PREPARATION FOR A VARIETY OF EVENTUALITIES. RAPID COMPLETE DISSEMINATION OF EACH BIT OF INFORMATION TO HIGHER Echelon FREQUENTLY CAN PRODUCE THE PREVENTION OF DANGERS, AND DISASTER CAN BE AVOIDED.

THE INCREASE IN ENEMY ARTILLERY FIRE IS THE MOST SIGNIFICANT CHANGE SINCE THE AFRICAN-SICILIAN OPERATIONS. DECREASED AERIAL OBSERVATION AND PHOTOGRAPHY MAKES IT MORE DIFFICULT FOR OUR ARTILLERY TO LOCATE AND THUS NEUTRALIZE THE ENEMY GUNS. SO GREATER EMPHASIS ON ACCURATE SHELL REPORTS, AND JOINTED INTERROGATION OF PRISONERS AS TO LOCATION OF BATTERIES IS NEEDED. THE GERMAN'S SELECTION OF THE SWAMPS AS A PLACE TO EMPLOY TWO OF THEIR BEST COMBINE DIVISIONS IS A STARTLING REMINDER THAT THE ENEMY CANNOT BE TRUSTED ALWAYS TO ATTACK ACCORDING TO "THE BOOK". THUS, WE SHOULD ALWAYS ANTICIPATE THE ENEMY AS VERY CLEVER AND AGGRESSIVE FOES.

GERMAN BATTLE METHODS - USED BY THE GERMAN'S.

USUALLY AFTER THE ALLIED FORCES BREACHED A LINE AND FOLLOWED IT UP WITH A PENETRATION IN DEPTH, AN ENEMY COUNTER OFFENSIVE SHOULD BE ANTICIPATED.

AFTER ANALYZING OUR STRENGTH, DEFENSIVE POSITIONS AND THE TERRAIN FEATURES, THE GERMAN SET FORTH CERTAIN ATTACK PRINCIPLES, DEPENDING ON THE SITUATION CONFRONTED. HIS PLAN, THEIR METHOD IS THAT OF QUICK EXPLOITATION OF SUCCESSES DURING THE INITIAL STAGE OF BATTLE ACTIONS, SINCE THE ENEMY CONSIDERS SUCH AN EXPLOITATION AS DECISIVE AS TO THE OUTCOME AS TO LATER SITUATIONS THAT WILL EVENTUALLY DEVELOP. THUS, THE FIRST OBJECTIVE IS TO ACHIEVE FREEDOM OF MOVEMENT FOR THE COMBINE UNITS. TO THIS END, THE US OWN LINE OF RESISTANCE HAS TO BE PENETRATED AT ITS WEAKEST POINTS. THESE POINTS WERE TO BE DISCOVERED BY RECONNAISSANCE IN FORCE ALONG THE ENTIRE FRONT.

THE WEAKEST STRONGPOINT WERE TO BE NEUTRALIZED BY FIRE OR BY SMOKE SCREENS.

WHenever possible, STRONGPOINTS WERE TO BE BYPASSED, AND LEFT FOR THE ENEMY TO DEAL WITH. "EXAGGERATED ATTENTION SHOULD NOT BE PAID TO TEMPORARY THREATS TO OUR LINES" IS THE ENEMY'S CONCEPTION TO SUCH PROPOSED ACTION. THE MAIN EFFORT IN THE MAIN DEFENSE WAS TO BE TAKEN BY THE REMAINING UNITS. THIS UNITS WERE TO BE IN POSITION TO ESCAPE & DEFEAT US RESERVE UNITS QUICKLY. THE REMAINING ANTI-TANK WEAPONS WERE TO BE DISTRIBUTED IN DEPTH THROUGHOUT THE ATTACKING OR ADVANCING UNITS.

ARTILLERY PREPARATION FOR THE ATTACK MUST NOT BE HANDLED IN DISORDERLY MANNER. ROLES OF THE INFANTRY IS DELAYED AND AMMUNITION BROUGHT THROUGH TO THEIR ASSIGNED POSITIONS AFTER THE LAST ROUND OF A PERIOD OF FIRE HAS BEEN DELIVERED. CONTINUED FIRE MUST BE CONTINUED UNTIL THE INFANTRY IS READY TO BREAK THROUGH.

ONE OF THEIR FAVORITE TACTICAL MEASURE INVOLVES THE SHIPING GROUND OF THEIR HEAVY TANK GUNS UNDER COVER OF SMOKE SCREEN OR AT NIGHT. WITH THEIR PATI-TANK GUNS AND COMBINE AND USUALLY AT NIGHT, THE GERMAN'S SHOULD SEARCH WEAPONS FOR POSITIONS THROUGH THE PERIMETER OF AN AREA OCCUPIED BY US TANKS OR FORTIFIED STRONGPOINTS. IF SUCCESSFUL, THE GERMAN WOULD REPLENISH A SMOKE SCREEN TO COVER THEIR POSITIONS AND THEN WOULD OPEN FIRE ON THE TANKS OR STRONGPOINTS WITHIN THE PERIMETER. THE FAVORITE POSITION FOR THE GERMAN PATI-TANK GUN IS AT A "CROSSROAD" WHERE HIGHWAY OR INTERSECTED AT RIGHT ANGLE. USUALLY A GERMAN GUNNER WOULD BE ON A BENCH OR A PARTICULAR OBJECT, TREE, A SIMPLE ETC, AND THEN, LATER WHEN A TANK OR OTHER OTHER MILITARY TARGET CAME NEAR THAT OBJECT, THE GUNS WILL REVERSE FIRE AND USUALLY HAVE THE RANGE CORRECT WITH THE FIRST ROUND. ALLIED INTELLIGENCE GIVES THAT CERTAIN CHARACTERISTICS WITH ARTILLERY AND PATI-TANK GUNS ARE VERY EFFICIENT.

ON CERTAIN WITHDRAWAL ACTIONS, NECESSITY MAY FORCE THE GERMAN TO ABANDON A MOTOR VEHICLE OR OTHER CONSIDERABLE EQUIPMENT. IN SOME CASES, THE ENEMY MAY LEAVE A LIGHT OR A SMALL FIRE BURNING IN THE ABANDON AREA. THUS, WHEN THE ALLIES OCCUPY THE ABOVE-MENTIONED AREA & BLACK OUT THE LIGHT & PUT OUT THE FIRE TO NOT DISCLOSE ANY OF OUR ACTIVITY IN THE AREA. THE ENEMY OPENED & DIRECTED HEAVY ARTILLERY FIRE. IT WAS CLEAR THAT THE ARTILLERY WAS ZEROED IN ON THE AREA WHERE THE LIGHT AND FIRE WAS LEFT BURNING, AND BY EXTINGUISHING BOTH, THE ALLIED TROOPS HAD Fallen IN WITH AN ENEMY STUN AND HAD INDICATED OUR ARRIVAL IN THE AREA. CONSIDERING SUCH EXPERIENCES BY ALLIED TROOPS; WE SHOULD EXPECT MANY VARIATIONS OF SUCH TACTICS EMPLOYED BY THE GERMANS IN FUTURE ACTIONS.

GERMAN ANTI-TANK WEAPONS

GERMAN ANTI-TANK GUNS ARE DIVIDED INTO SEVERAL CLASSES. THE MAIN CLASS COMPRISES GUNS BUILT SPECIFICALLY FOR ANTI-TANK MISSIONS AND FALLS INTO 3 GROUPS: 1) GUNS OF CONVENTIONAL GERMAN DESIGN; 2) GUNS BUILT WITH TAPERED-BORE TUBES; 3) AND CAPTURED ANTI-TANK WEAPONS. THE ORTHODOX GERMAN GUNS IN THE FIRST GROUP ARE DESIGNED TO PROMOTE FRONT PENETRATION AT MAXIMUM RANGES BY USING RELATIVELY HEAVY PROJECTILES WITH HIGH VELOCITIES. THE FIRST SUCH GUN WAS THE 37MM RHEINMETALL (SEE ITEM AAK 7). THIS WAS TOO LIMITED IN POWER AT THE TIME OF THE BATTLE OF FRANCE 1940, AND WAS SUPERSEDED BY THE 50MM (5-CM AAK 38). THIS 50MM WEAPON IS GRADUALLY BEING REPLACED IN TURN BY THE 75MM (7.5-CM AAK 40) WHICH IS THE STANDARD GERMAN ANTI-TANK GUN NOW IN USE. SINCE THE AAK 40 IS CAPABLE OF PENETRATING 4.43 INCHES OF ARMOR AT 500 YARDS, IT IS CONSIDERED AN ADEQUATE WEAPON. THESE 3 GUNS ALL HAVE SIMILAR BASIC FEATURES: SPLIT FURROWER TRAILS, A LOW SILHOUETTE, AND A LARGE SHIELD. ALL HAVE BEEN KEPT AS HIGH AS POSSIBLE TO INCREASE TACTICAL MOBILITY. THE 50MM AND THE 75MM GUNS EMPLOY MUZZLE BRAKES TO REDUCE RECOIL AND THIS PERMIT LIGHTER CARTRIDGES. THE 88MM (8.8-CM AAK 43) WAS ADDED TO THIS GROUP. THIS GUN PENETRATES 4.4 INCHES OF ARMOR AT 2500 YARDS, BUT ITS GREAT WEIGHT ON ITS SPLIT-TRAIL, TWO-WHEELED CARRIAGE SOMEWHAT REDUCES ITS MOBILITY. ANOTHER VERSION OF THIS GUN - THE 8.8 CM AAK 43 - ADAPTS THE LONG TUBE, BUT ON A CARRIAGE LIKE THAT OF THE WELL KNOWN 88MM ANTI-AIRCRAFT GUNS OF THE FLAK 18 AND 36 TYPE. THE GUNS IN THE TAPERED BORE GROUPS ARE DESIGNED TO GIVE GREATER MOBILITY THAN CONVENTIONAL GUNS CAPABLE OF ACHIEVING IDENTICAL ARMOR PENETRATION. TAPERED BORE GUNS SEEM TO ACHIEVE PENETRATION AT SHORT RANGES, USING LIGHT PROJECTILES WITH AN VERY HIGH INITIAL VELOCITIES. ALL 3 OF THE TAPERED BORE GUNS BARE THE SAME DATE OF INTRODUCTION, 1941. THE FIRST TO BE INTRODUCED WAS THE VERY LIGHT 28/30 MM (2.8-CM SP. 41) 7.5 WHICH DOES NOT SEEM EASILY BE COMMANDED BY ONE GUNNER. THE 28/30 HAS BEEN USED BY AMERICAN TROOPS, WITH THE BREAK UP OF THE HEADS AND RIFLING WITH IT, AND ALSO HAS BEEN USED IN THE AIRBORNE VERSION. IT HAS BEEN ISSUED EXTENSIVELY TO GERMAN AND CAPTURED IN PART BY A RIFLE COMPANY ANTI-TANK WEAPON. THE NEXT LARGER TAPERED BORE GUN THE 42/46 MM (4.2-CM AAK 41) 7.5 IS CONSIDERED AS A MODIFIED 3.7-CM AAK CARRIAGE. THIS WEAPON ALSO HAS BEEN USED BY AMERICAN TROOPS. THE LARGEST IS THE 45MM GUN ON WHEELS 7. THE 45MM HAS MOST UNUSUAL DESIGN. THERE IS NO AXLE, INSTEAD, THE WHEELS ARE SECURED TO THE MAIN SHIELD WITH THE GUN THROUGHOUT IN THE SHIELD AS WELL.

THE GROUP OF CAPTURED ANTI-TANK WEAPONS INCLUDES A NUMBER OF GUNS THAT WERE SEIZED DURING THE COURSE OF ITS CAMPAIGNS. MOST OF THESE GUNS HAVE BEEN SEIZED BEFORE 1941. THUS, THE GERMANS HAVE BEEN USING THEM AS "STOP-GAP" WEAPONS, SUBSTITUTING THEM FOR

THE BETTER MATERIAL THAT GERMAN FACTORIES HAVE NOT BEEN ABLE TO PRODUCE IN SUFFICIENT QUANTITY TO SUPPLY ALL FRONTS. FOR EXAMPLE, EXTENSIVE USE IS MADE OF THE FRENCH MODEL 1917 47MM GUN (47 PAK 1517), WHICH HAS AN EFFECTIVE RANGE OF ONLY 550 METERS. HOWEVER, THERE ARE TWO REALLY USEFUL AND EFFICIENT WEAPONS THAT THE GERMANS HAVE PUT INTO COUSIGNMENT.

ONE IS THE SOVIET 76.2MM MODEL 1936 FIELD GUN, WHICH THE RED ARMY DESIGNED WITH THE VIEW TO USING IT FOR ANTI-TANK AND EVEN ANTI-AIRCRAFT PURPOSES. THE GERMANS HAVE FOUND THIS HIGH-VELOCITY GUN VERSATILE, AND HAVE MODIFIED IT BY PUTTING A DOUBLE SHIELD AND SOMETIMES A Muzzle BRAKE.

ALTHOUGH IT IS AN ALTERNATE WEAPON WITH THE 75MM PAK 40 AND THE 88MM ANTI-TANK GUN IN THE GERMAN ARMY, THE SOVIETS HAVE FOUND IT TOO HEAVY AND NOT SUITABLE FOR THEIR TACTICAL USE. ANOTHER FOREIGN GUN FAVORED BY THE GERMANS IS THE FAMOUS 75MM SWISS MODEL 1897. THE GERMANS MODIFIED THIS GUN BY FITTING IT WITH A LARGE Muzzle BRAKE AND BY PUTTING THE GUN ON THEIR OWN 50MM ANTI-TANK GUN CARRIAGE, AND OBTAIN THE RESULTS AS THE 7.5 CM PAK 97/38. SINCE THE FRENCH 75 LACKS Muzzle VELOCITY, IT CANNOT BE REGARDED AS A SATISFACTORY MODERN ANTI-TANK GUN.

A SECOND AND HIGHLY IMPORTANT CLASS OF ANTI-TANK WEAPONS CONSISTS OF ANTI-AIRCRAFT GUNS EMPLOYED IN AN ANTI-TANK ROLE. THE HIGH VELOCITY OF ANTI-AIRCRAFT GUNS MAKES THEM SUITABLE FOR ANTI-TANK MISSIONS, AND SINCE 1918, GERMAN DESIGNERS HAVE PAID SPECIAL ATTENTION TO THE POSSIBILITY THAT ANY GERMAN ANTI-AIRCRAFT GUN COULD BE USED AS AN ANTI-TANK WEAPON. THE SMALLER GUNS - THE 20MM, 2 CM FLAK 30 AND 38, AND THE 37MM 3.7 CM FLAK 18 AND 36 - ARE NOW OF LITTLE VALUE IN AN ANTI-TANK ROLE BECAUSE OF THEIR LACK OF POWER. THEY REMAIN EFFECTIVE AGAINST LIGHTLY ARMORED VEHICLES, AND AGAINST THE VISION SLITS, PORTS, AND OPTICAL APPARATUS OF LARGER TANKS. THE 88MM GUNS ARE NOTORIOUS FOR THEIR EFFECTIVENESS AGAINST TANKS OF ALL SIZES. THESE GUNS INCLUDE THE FLAK 18 SERIES 18, 36 X 37, AND THE FLAK 41. THOSE OF THE FLAK 18 SERIES HAVE SPECIAL CARRIAGES WITH FOUR OUTRIGGERS, AND ARE CAPABLE OF EFFICIENT FIRE WITH HEAVY PENETRATING AT GREAT RANGES. THEY DIFFER IN MINOR DETAILS ONLY. THE FLAK 41 IS A SOMEWHAT SIMILAR WEAPON, BUT MUCH MORE POWERFUL, HAVING A GREATLY INCREASED Muzzle VELOCITY. INTRODUCED IN 1942, IT IS SIMILAR TO THE 88 CM PAK 43/41 IN THAT ITS GREAT WEIGHT REQUIRES IT LESS CONSIDERATION WOULD SEEM DESIRABLE. FITTED WITH A LARGE SHIELD, IT WAS DESIGNED WITH GREATER CONSIDERATION FOR ANTI-TANK FIRE THAN WERE THE GUNS IN THE FLAK 18 SERIES. THE LATTER, AS A MATTER OF COURSE, USUALLY ARE FITTED WITH A SPECIAL CARRIAGE AND SHIELD WHEN THEY ARE FUNCTION PRIMARILY IN AN ANTI-TANK ROLE. THIS CARRIAGE PERMITS A LIMITED FIELD OF FORWARD FIRE FROM THE WEATH WITHOUT THE NECESSITY OF RELOADING THE GUN.

IT IS NOTABLE THAT, IN THE CASE OF MOST OF THE GUNS MENTIONED, THE GERMANS HAVE MADE GREAT EFFORT TO REDUCE OR ELIMINATE WEIGHT SO AS TO GAIN OPTIMAL MOBILITY, WHILE THE USE OF LIGHTER AND MORE LIGHTER CARRIAGES THROUGH EMPLOYMENT OF RECOIL-REDUCING Muzzle BRAKES HAS BEEN GENERAL. THERE HAS BEEN A RECENT TENDENCY TO RETAIN MOBILITY BUT TO INCREASE Muzzle VELOCITY BY INCREASING THE GUN-TUBE SAFETY FACTOR. THIS APPEARS TO HAVE BEEN DONE FIRST IN THE CASE OF SUCH HEAVY WEAPONS AS THE 88MM PAK 43/41 AND THE FLAK 41.

ANOTHER IMPORTANT CLASS OF ANTI-TANK WEAPONS IS REPRESENTED BY THE SELF-PROPELLED ANTI-TANK GUNS MOUNTED ON LIGHTLY ARMORED CHASSIS. TYPICAL OF THE BEST OF THIS CLASS ARE THE RHINOCEROS (AN 88 MOUNTED ON A MODIFIED TANK CHASSIS) AND THE 12 CM PAK 40 (A 12 CM GUN MOUNTED ON A MODIFIED TANK CHASSIS). THE 75-MM 7.5 CM PAK 40 (SELF), AND THE 90.2MM 9 CM PAK 36 ON THE OTHER HAND, ARE MOUNTED ON A LIGHTLY ARMORED CHASSIS OF THE TYPE KNOWN AS PAKFELD 38, WITH ENGINES MOUNTED FORWARD SO THAT GERMANS CAN STAND ON THE FLOOR OF THE HULL. APPROXIMATELY A GENERAL TERM REFERRING TO ALL HIGHLY MODIFIED TANK CHASSIS FOR GERMAN TANK DESTROYERS. SUCH MODIFIES GIVE THE WEAPON A HIGH SUBJECT.

SINCE MANY OF THE LATTER TYPES OF SELF-PROPELLED GUNS ARE IN USE TODAY, IT MAY BE SAID THAT THERE ARE AS MANY TYPES OF GERMAN SELF-PROPELLED ANTI-TANK GUNS AS THERE ARE POSSIBLE COMBINATIONS OF GUNS AND CHASSIS.