

HE KNOWS THE CHANCES ARE THAT WE WILL SMOKE HIS T62 WITH OUR ARTILLERY. AS A COUNTERMOVE, HE WOULD LIKE TO SUPPRESS OUR ARTILLERY BY FIRING AT IT WITH HIS 130MM CANNONS. IT IS IMPORTANT TO OUR SUCCESS THAT HE NOT SUPPRESS OUR ARTILLERY BECAUSE WE MUST PLACE SMOKE ON THE T62, SO WE IN TURN SUPPRESS HIS 130s, EITHER WITH OUR ARTILLERY OR OUR AIR ATTACKS WITH FIGHTERS. CLOSE AIR SUPPORT OF THE MANEUVER FORCE IS ESSENTIAL. However, in order to Launch fighters through a dense air ENVIRONMENT, WE MUST SUPPRESS HIS AIR DEFENSE WEAPONS, EITHER WITH ELECTRONIC WARFARE, ELECTRONIC COUNTERMEASURES, OR WITH OUR ARTILLERY, AND COUPLED WITH MANY AIR FORCE CAPABILITIES TO DO THE SAME.

(U) This is a portrayal of the HEART of the Fighting ARMY.

OPERATING IN ACCORDANCE WITH OUR CONCEPT AND OUR CONCEPT IS THAT

YOU HAVE TO MOVE. TO MOVE AGAINST THE KIND OF LETHALITY THAT

WE HAVE EXPLAINED, YOU NEED TO SUPPRESS. THE THINGS YOU MOVE

HAVE GOT TO BE VERY STRONG AND POWERFUL COMBAT WEAPONS, BE
CAUSE THERE IS NO POINT IN BREAKING THROUGH IF, WHEN YOU GET

THERE, YOU CAN'T DO ANYTHING.

(U) IN ORDER TO FIGHT WHILE OUTNUMBERED YOU MUST HAVE YOUR FORCES AT THE RIGHT PLACE, AT THE RIGHT TIME, AND HOPE THE ENEMY WILL HAVE HIS FORCES AT THE WRONG PLACE AT THE RIGHT TIME. THEREFORE, WE NEED TO SEE THE BATTLEFIELD. WE NEED TO SEE IT EARLY AND, WHEN WE GET INTO A FIGHT, WE NEED TO SEE IT IN DETAIL. WE NEED TOTAL CONTROL OVER OUR COMBAT FORCES. AND WE MUST CONTINUOUSLY MAINTAIN THEM, SUPPLY THEM, TRANSPORT THEM, AND GIVE THEM MEDICAL SUPPORT ON THAT

BATTLEFIELD.

## (CHART 26)

- (U) When you look at the Army, in the light of that particular picture, you find that there are four combat elements, four basic building blocks in our Army force structure. These four elements deliver ordnance against the enemy. They consist of tank battalions (54 tanks each) of three companies each; mechanized infantry battalions, self-propelled artillery battalions; and air defense battalions.
- (U) These types of organizations are analogous to the Navy's destroyers, frigates, and cruisers and the Air Force's fighters and bombers. They carry the battle to the enemy and inflict casualties. Another way to look at these

## CHIENTA

IMPORTANT UNITS IS AGAINST THE BACKGROUND OF OUR DEPLOYED

FORCES IN EUROPE.

### (CHART 27)

(C) THIS CHART DEPICTS THE CURRENT ORGANIZATION IN EUROPE. Inside the Lazy diamond we have grouped those four ordnance DELIVERING ELEMENTS OF THE ARMY. WE HAVE 33 BATTALIONS OF ARMOR AND THAT INCLUDES THE CALVARY SQUADRONS WHICH ARE ARMED WITH THE M551 SHERIDAN. THE SHERIDANS ARE, IN FACT, MOBILE ANTI-TANK WEAPONS. TO COMPLEMENT THE TANK BATTALIONS, WE HAVE INTEGRATED 24 MECHANIZED INFANTRY BATTALIONS. THAT TEAM IS SUPPORTED BY 31 BATTALIONS OF FIELD LERY AND 15 BATTALIONS OF AIR DEFENSE. THAT IS THE HEART OF THE COMBAT POWER OF OUR FORCES IN EUROPE. HOWEVER, IN ORDER

TO FOLLOW OUR CONCEPT OF MOVING AT THE CRITICAL TIME TO THE RIGHT PLACE AND STILL BE PROPERLY SUPPORTED, THERE ARE OTHER UNITS INVOLVED. TO SEE THEBATTLEFIELD BETTER THAN THE ENEMY, AND TO SEE IT IN TIME, THREE PERCENT OF THAT FORCE, A VERY MODEST NUMBER, IS INVOLVED IN INTELLIGENCE. THAT PERCENTAGE MAY GROW IN THE FUTURE. IN ORDER TO HAVE POSITIVE CONTROL, SO THAT WHEN WE WANT A BATTALION TO MOVE IT CAN RESPOND IMMEDIATELY, WE HAVE 12% OF THE FORCE INVOLVED IN COMMAND AND CONTROL, COORDINATION AND COMMUNICA-TION. ALL OF OUR SIGNAL AND HIGHER HEADQUARTERS ARE INCLUDED IN THESE TOTALS. IN ORDER TO SUPPORT MOVEMENT ON THE BATTLE-FIELD NINE PERCENT OF THE FORCE IS COMBAT ENGINEER. IN THE LEFT CENTER OF THE CHART WE HAVE TWO PERCENT AVIATION.

AVIATION CONTRIBUTES TO INTELLIGENCE AND, INCREASINGLY, IT WILL CONTRIBUTE TO THE DELIVERY OF ORDNANCE, PARTICULARLY AS THE TOW IS PUT ON THE COBRA. BELOW THE LINE, 30% OF THE FORCE IN EUROPE IS CLASSIFIED AS COMBAT SERVICE SUPPORT. THIS CATEGORY INVOLVES SUPPLY IN GENERAL, THAT IS THE SUP-PLY OF AMMUNITION, FOOD, CLOTHING, AND FUEL. IT ALSO IN-CLUDES MAINTENANCE OF VEHICLES, ALL COMBAT MATERIEL OF THE OPERATING UNITS; THEIR TRANSPORTATION AND FINALLY MEDICAL SUPPORT AND ADMINISTRATION. LET ME RETURN AND GO INTO A LITTLE MORE DETAIL ON THOSE BATTALIONS INSIDE THE LAZY DIAMOND, THE ORDNANCE DELIVERING PART OF THE ARMY IN EUROPE.

(CHART 28)



- THE FORCE, ARE ARMED WITH THE M60A1 AND M60A2 TANKS AND THE CALVARY WITH THE M551 SHERIDANS. FROM A COMBAT DEVELOPMENTS STANDPOINT WE ARE TRYING TO IMPROVE THAT COMBAT BUILDING BLOCK.

  THE QUESTION AS TO HOW MANY BUILDING BLOCKS WE PLACE IN THE FORCE HAS TO DO WITH THE STRATEGY, THE DOLLARS AVAILABLE TO PROCURE EQUIPMENT AND TRAIN PERSONNEL AND THE SUCCESS OF RECRUITING.
- (U) At the moment the Army is upgrading the performance of the tank inventory through cost effective improvements.

  We are considering the M60A3 tank with the laser range finder and full resolution computer. We are looking at the XM1 tank with its improved armor as a step toward an effective anti-

## MATTHA!

TANK GUIDED MISSILE DEFENSE. WE ARE ALSO CONSIDERING A

NUMBER OF GUN CANDIDATES. WITH THE CALVARY WE ARE LOOKING

AT GROUND AND AIR SCOUT VEHICLES.

### (CHART 29)

(C) MECHANIZED INFANTRY WITH 24 BATTALIONS COMPRISING 13%

OF THE FORCE IS NOW EQUIPPED WITH THE M113A1 AND A 50 CALIBER

MACHINE GUN. WE NEED A TRUE FIGHTING VEHICLE, A MECHANIZED

INFANTRY FIGHTING VEHICLE. ONE THAT IS ARMED WITH A MUCH

IMPROVED AUTOMATIC CANNON FOR SUPPRESSION, AND CAPABLE OF

OUTRANGING THE 73MM GUN ON THE SOVIET MECHANIZED COMBAT

VEHICLE (BMP) AND DEFEATING IT WITH AN ARMOR PIERCING ROUND.

(CHART 30)

47



## Chillian .

(C) WE HAVE 31 BATTALIONS OF FIELD ARTILLERY, MOSTLY 155 SELF-PROPELLED HOWITZERS, BUT SOME 8 INCH AND 175MM FOR A TOTAL OF TEN PERCENT OF THE FORCE. I TALKED A BIT AGO ABOUT THE DIFFERENCE BETWEEN BOMBING TARGETS WITHOUT PRECISE WEAPONS AND BOMBING THEM WITH PRECISE WEAPONS. THE CANNON LAUNCHED GUIDED PROJECTILE (CLGP) WITH ITS LASER SEEKER, IS DESIGNED TO HIT THE TARGET THE FIRST TIME. THE ARMY WOULD BE EXTREMELY HAPPY TO OBTAIN THE AIR FORCE'S MAVERICK EFFECTIVENESS WHERE OUT OF 50 TRIES THEY VERY NEARLY ACHIEVED 45 HITS. IN ADDITION TO CLGP WE WILL ALSO HAVE, AND ARE NOW TESTING FOR THE FIRST TIME, A RADAR WHICH CAN FIND ENEMY ARTILLERY AND MORTARS. WITH THESE RADARS WE WILL BE ABLE TO FIND THE ENEMY'S AND THEN SUPPRESS IT ARTILLERY BEFORE HE CAN SUPPRESS OURS. WE WANT OUR ARTILLERY

# SHEET

TO BE ABLE TO PUT SMOKE ON THE T62, SO OUR TANK ATTACK CAN SUCCEED. BECAUSE WE ARE GOING TO FIGHT OUTNUMBERED, WE MUST GET MORE OUT OF THE ARTILLERY WE HAVE NOW. THE

TACTICAL FIRE DIRECTION SYSTEM (TACFIRE) WILL HELP BY IMPROVING THE EFFICIENCY OF OUR ARTILLERY.

## (CHART 31)

(U) IN AIR DEFENSE WE ARE BEHIND, EXCEPT

THAT THE IMPROVED HAWK IS PROBABLY BETTER THAN ANY SUR-

CONSIDERING THE FACTS AND ANALYZING THE NEED FOR A NEW DIVISION AIR DEFENSE GUN SYSTEM TO REPLACE THE VULCAN TO GIVE OUR ARMY A SYSTEM BETTER THAN'THE SOVIET ZSU-23-4. WE ALSO

GENERAL UNCLASSIFIED



MISSILE, THE STINGER, AND

THE SAM D FOR

HIGH AND MEDIUM ALTITUDE COVERAGE. WE HAVE JUST GIVEN A

CONTRACT FOR A SHORT RANGE AIR DEFENSE MISSILE SYSTEM.

(U) I AM NOT GOING TO TALK MORE ABOUT THIS JUST NOW EXCEPT

YET EMPHASIZED FROM CHART ONE. IF LETHALITY IS THE PROBLEM

AND THE COMBINED ARMS TEAM IS THE SOLUTION, TRAINING WILL MAKE

THE DIFFERENCE. THERE WERE TIMES IN THE ARAB/ISRAELI WAR WHEN

T55 TANKS FOUGHT T55 TANKS AND THE QUALITY OF THE CREWS,

THE COURAGE, IMAGINATION, AND TRAINING OF THE COMMANDERS MADE

THE DIFFERENCE.

(CHART 32)

50

### (CHART 32)

(U) WE BUY WEAPONS THAT HAVE A HIGH PROBABILITY OF HIT OVER PARTICULAR RANGES AND WE HAVE SPENT MILLIONS OF DOLLARS IN ACQUIRING THAT CAPABILITY; BUT MANY TIMES WHEN WE PUT THOSE NEW WEAPONS IN THE HANDS OF ARMY CREWS, THEY DID NOT

ACHIEVE THE

ACTUAL CREW PERFORMANCE AND WHERE WE OUGHT TO BE CAN ONLY

BE CLOSED THROUGH TRAINING. I WILL GIVE YOU JUST ONE

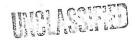
EXAMPLE -- THIS IS A SUBJECT UNTO ITSELF.

## (CHART 33)

(U) EARLIER I INDICATED THAT THE T62 TANK AND THE M60 TANK
WERE ESSENTIALLY EQUAL IN COMBAT CAPABILITY. THIS CHART



SHOWS THAT THE TANK THAT FIRES FIRST, UP TO ABOUT 1,000 METERS OR MAYBE EVEN 1,500 METERS, HAS A 50% PROBABILITY OF WINNING THAT ENGAGEMENT OVER THE TANK THAT FIRES SECOND. I THINK IT IS EVEN MORE TELLING TO THINK ABOUT WHAT HAPPENS EACH TIME TO THE TANK THAT FIRES SECOND. IN ORDER TO CLOSE THAT GAP, AND IN ORDER TO EXPLOIT OUR WEAPONS SYSTEMS POTENTIAL, WE ARE CHANGING OUR GUNNERY PROCEDURES IN ORDER TO FIRE IN / TO SEVEN SECONDS, INSTEAD OF 13 TO 15 SECONDS. WE NEED TO DO THIS IN ORDER TO ACHIEVE A HIGH PROBABILITY OF WINNING FUTURE TANK BATTLES. THE ISRAELIS PROVED TO BE MASTERS AT THIS ART. ALTHOUGH I DON'T INTEND TO TALK ABOUT THE IMPORTANCE OF TRAINING IN ANY DEPTH, I WOULD CONCLUDE THAT THE COMBINED ARMS TEAM MAY BE THE ANSWER TO LETHALITY BUT THE COMBINED ARMS TEAM REQUIRES TRAINING TO BE EFFECTIVE.



THE ARAB/ISRAELI WAR IN TERMS OF GENERALITES, LET ME SAY THAT

THERE ARE DOZENS OF IMPORTANT BUT DETAILED LESSONS

LEARNED. THESE LESSONS VARY ALL THE WAY FROM THE LOGISTICAL

PROBLEMS TO SMALL TECHNICAL PROBLEMS WITHIN PARTICULAR

WEAPONS SYSTEMS AND ALL HAVE BEEN ADDRESSED.

## (CHART 34)

(U) As I said at the beginning you can sometimes get lost in 162 recommendations and not quite derive from them the real meat. But they are all important in one way or other. We are currently working on 148 and 14 have been completed.

I want to give you an example or two of these detailed lessons.

(CHART 35)



- (U) THE ISRAELIS POINTED OUT TO US THAT THE HYDRAULIC FLUID

  IN OUR TANKS WAS FLAMMABLE. ARMY MATERIEL COMMAND IS NOW

  CONTRACTING FOR NON-FLAMMABLE HYDRAULIC FLUID.
- (C) THEY POINTED OUT THAT THE NUMBER OF CATASTROPHIC LOSSES OF TANKS, SUCH AS THE T62, CAME FROM THE FACT THAT TOO MUCH AMMUNITION WAS STORED IN THE TURRET. THE ISRAELIS WANT TO STORE AS MUCH OF IT BELOW THE TURRET RING AS POSSIBLE, BUT YET NOT DECREASE THE NUMBER OF STORED ROUNDS IN THE TANK. REASON -- WHEN YOU ARE IN HULL DEFILADE ONLY THE TURRET IS EXPOSED. IF THE AMMUNITION IS NOT UP IN THE TURRET IT WON'T EXPLODE IF THE TURRET IS HIT. YOU WON'T THEN HAVE A CATASTROPHIC FIRE OR EXPLOSION, WHICH COULD DESTROY THE WHOLE TANK. WE ARE REARRANGING MAIN GUN ROUND STORAGE.



(C) THE USE OF SUPPRESSION. THE ISRAELIS UNDERSTAND AND

AN
WANT/IMPROVED SUPPRESSION CAPABILITY.

THEY WOULD LIKE TO HAVE AN AUTOMATIC

CANNON. As a MATTER OF FACT, THEY WOULD LIKE TO SUPPRESS

AT A DISTANCE UP TO 3,000 METERS. WE FRANKLY HAVEN'T FOUND

HOW TO SUPPRESS WITH AN AUTOMATIC CANNON AT 3,000 METERS

AND STILL KEEP IT COST EFFECTIVE. BE WE DO AGREE WITH THE

DESIRABILITY OF SUCH A WEAPON SYSTEM. HOWEVER, THE BUSH
MASTER SYSTEM IN DEVELOPMENT IS EFFECTIVE AT A MILE.

(C) CBR Defense. We now know, and are shocked in fact, by

THE EXTENT THE SOVIETS HAVE BUILT CBR DEFENSE INTO ALL OF

THEIR SYSTEMS. WE HAVE A LONG WAY TO GO AND A LOT OF MONEY

MAY BE REQUIRED TO CATCH UP.

(C) BATTLEFIELD CANNIBALIZATION. THE ISRAELIS PUT HUNDREDS DAMAGED OF/TANKS BACK INTO OPERATION, 2,700 IN 10 DAYS, OR MORE THAN THEY HAD IN THEIR INVENTORY. MANY TANKS WERE REPAIRED OVER AND OVER AGAIN. THEY SENT HIGHLY SKILLED TEAMS OUT ON THE BATTLEFIELD TO TAKE THE TURRET FROM THIS TANK, THE TRACK FROM THAT TANK, THE ENGINE FROM THAT TANK, AND THE FIRE CONTROL EQUIPMENT FROM A FOURTH TANK. THEY THEN PUT IT ALL TOGETHER AND / ONE OPERATING TANK. WE HAVE RUN AN EXPERIMENT ON BATTLEFIELD CANNIBALIZATION AT ANNISTON, ALABAMA AND FOUND THAT OUR MECHANICS ARE WELL TRAINED, THE EQUIPMENT THEY HAVE IS ABOUT RIGHT, BUT WE DON'T HAVE THOSE TRAINED EXPERTS WHO CAN SAY THAT IT IS BETTER TO TAKE THAT TURRET, TAKE THAT TRACK, TAKE THAT POWER TRAIN AND PUT IT ALL TOGETHER ON THIS



TANK. WE ARE ADDRESSING THAT AND MAY HAVE TO PROVIDE SPECIALIZED TRAINING TO ACHIEVE A SIMILAR CAPABILITY. (U) LET ME FINISH WITH A SERIES OF CHARTS WHICH DRAW THIS TOGETHER IN TERMS OF OUR WEAPONS SYSTEMS ACQUISITION EFFORT. OUR PURPOSE IS TO DEPICT HOW THE LESSONS LEARNED COUPLED AND INTERACTING WITH OUR CONCEPT OF OPERATION DETERMINE THE CHARACTERISTICS REQUIRED IN OUR NEW SYSTEMS. THESE CHARTS ARE DESIGNED TO SHOW THE IMPACT OF THESE FACTORS ON THE WEAPON SYSTEMS ACQUISITION PROCESS, ON THE DETERMINATION OF THE REQUIREMENTS, THE CAPABILITIES AND CHARACTERISTICS THAT WE WANT TO BUILD INTO OUR WEAPONS SYSTEMS, PROVIDED WE CAN DEMONSTRATE THEY ARE COST-EFFECTIVE. (CHART 36)

LET'S START WITH TANKS. DOWN THE LEFT SIDE

(C)

IS OUR CONCEPT OF OPERATIONS: SHOOT FIRST, SHOOT ON THE MOVE, ON-BOARD SUPPRESSION AND SO ON. ON THE RIGHT SIDE ARE THE LESSONS LEARNED FROM THE ARAB/ISRAELI WAR WHICH CORRELATE WITH OUR CONCEPT OF OPERATIONS.

DOWN THE MIDDLE WE HAVE

THE CHARACTERISTICS WHICH SHOULD BE INCORPORATED IN OUR

NEW TANKS OR SHOULD BE INCORPORATED IN THE PRODUCT IMPROVE
MENT OF THE TANKS WE ALREADY HAVE. FOR EXAMPLE, IN THE

ARAB/ISRAELI WAR, IT WAS CLEAR THAT HE WHO FIRES THE FIRST

ROUND IS LIKELY TO WIN. OUR CONCEPT NOW SAYS SHOOT FIRST.

TO DO THAT AT LONGER RANGES WE ARE EVALUATING THE LASER RANGE

FINDER WE NEED ON-BOARD SUPPRESSION. THE ISRAELIS DON'T

LIKE OUR CO-AXIAL MACHINE GUN. IT IS NOT RELIABLE. WE AGREE.

WE ARE GOING TO REPLACE THE M219 MACHINE GUN, PROBABLY WITH A

M60 MACHINE GUN.

## (CHART 37)

(C) As INDICATED IN THE EARLIER DISCUSSION ON TACTICS AT THE COMPANY LEVEL, THE ARMY MUST HAVE THE CAPABILITY TO FIGHT WHILE MOVING. THE ISRAELIS AGREE. THEY DON'T LIKE THE M113 BECAUSE YOU CAN'T FIGHT FROM THAT CARRIER. THEREFORE, WE ARE PRESSING FOR A MECHANIZED INFANTRY COMBAT VEHICLE THAT CAN MOVE WITH THE TANK AND CAN FIRE WHILE ON THE MOVE. IT MUST HAVE A STABILIZED TURRET TO DO SO. ALTHOUGH THE ISRAELIS DID NOT ADDRESS THE PROBLEM, WE ARE CONVINCED THAT WE MUST NOT PUT OUR MICV ON THE BATTLEFIELD AND HAVE IT OUT GUNNED BY THE SOVIET BMP. THEREFORE, WE ARE PUTTING A BUSHMASTER AUTOMATIC