

# NATO deliberates on West German extended air defense proposal

by George Gregory

At their May 1986 meeting, NATO defense ministers adopted a proposal from the West German government to begin concept-studies for an integrated and extended West European air defense. The NATO Military Committee meeting on Dec. 4 in Brussels reviewed national studies on the emerging "extended European air defense system."

The extended European air defense conception is an immense challenge to West European industry and science, and is also a major effort to undercut Soviet efforts to "decouple" Western Europe from the U.S. strategic defense commitments.

Studies are also being conducted under the auspices of AGARD (Advisory Group for Aerospace Research and Development) at the SHAPE Technical Center, and the staff of SACEUR. Gen. Bernard Rogers is acting in support of these activities. In the Federal Republic of Germany, the key NATO military partner in continental Europe, the Ministry of Defense, has a project team collaborating with the system-architecture study teams of West German national industries, who are expected to deliver their first proposals by summer 1987.

## What relation to SDI?

West German officials, particularly Defense Minister Manfred Wörner, insist that "there is no link" between the extended European air-defense project and the U.S. Strategic Defense Initiative (SDI). "The two programs are completely independent, particularly because we must act to neutralize a manifold increasing threat *now*, whereas SDI is still in the research phase." Wörner adds, however, ". . . but somewhere down the line, the results of SDI research may be utilized in the extended European air-defense as we envision it."

The Soviet airborne threat (nuclear, chemical, conventional, manned, unmanned, ballistic or air-breathing) differs in character against the United States and Europe, but not in scope. The pace of Soviet deployment and development of

modernized ballistic missiles and strategic missile defense against the United States, parallels the vast upgrading of Soviet air force capabilities, short- and medium-range ballistic missiles, cruise missile capabilities, and forward-based, dense-grid air-defense capabilities against Western Europe.

According to a memorandum, "Air Defense in Europe," by two West German General Staff officers serving on the Planning Staff of the Bonn Defense Ministry, Col. Jörg Köpke and Lt.-Col. Klaus Olshausen, and published in the October 1986 issue of *Wehrtechnik*, West German conceptions of "extended European air defense" consist of two basic project-pathways, one "conservative," the other "innovative."

It is within the "innovative" pathway, that "early-warning, reconnaissance, and battle-management systems are to be considered, as well as land-based and airborne weapons systems or systems components. In this context, it is thoroughly probable that investigations in the framework of SDI research will contribute essential knowledge." Since the "innovative pathway" is both preferred and indispensable to neutralize the Soviet threat now and in the future, officials acknowledge a "technology link" to SDI. The chief questions are whether SDI survives the Reagan administration, and whether the relevant technologies can be utilized for air defense in and for Europe—or whether the SDI which survives would be dedicated to a strategic orientation of "Fortress America."

Given the political and financial constraints imposed on SDI and its technological spinoffs on the U.S. economy, West German military and industrial-scientific circles still place the proposals circulated in the *Executive Intelligence Review*/Fusion Energy Foundation joint memorandum of February 1985, "The European Air Defense Initiative—Guidelines for a European Crash Program for Beam Weapon Defense" at the "most innovative" far end of the scale of desirable "innovative pathways."

In the meantime, threat-assessments have gained in

## Warsaw Pact short range missiles and shorter range intermediate forces (SR-INF)

Category	System	Date introduced	Range (km)	Armament/warheads	Fire-ready in # minutes	Guidance technology	Reloadable y/n	Circular error probable (CEP, m)		# systems totals		
								now	future	USSR	WP	tot.
Tactical	FROG-7	1965 (7A) 1968 (7B)	70	nuc., chem., conv.	15-30	unguided	yes	500				
	SS-21 SCARAB	1976	120	nuc., chem., conv.	< 30	unknown	yes	50-100	50	460	240	700
Operative/ tactical	SS-18 SCUD-B	1961	300	nuc., chem., conv.	< 60	simple inertial	yes	700				
	SS-23 SPIDER	1982	500	nuc., chem., conv.	< 30	inertial	yes	200-300	50-100	500	130	630
Operative	SS-12 SCALE-BOARD	1967	900	nuclear	< 60	inertial suspected	yes					
	SS-12/22	1979	900	nuclear, possibly conv.	< 60	guided, technology unknown	yes	200-300	50-100	100		100

\*Unofficially, West German intelligence sources think the estimate of 700 SS-21 systems is a gross underestimation; since SS-21 began to replace FROG in 1980, Soviet production-rate capabilities for this system lead to more appropriate estimates of about 2500 SS-21s, most of which have been "kept in the shadows."

Source: Wehrtechnik 10/86.

sharpness. As a result, "most innovative" is hardly a pejorative term, and has come to mean "the closest to what is actually bottom-line necessity."

### Components of the air threat

Köpke and Olshausen mention the following components of the Soviet air threat in their memorandum:

- Qualitative and quantitative enhancements of Soviet/Warsaw Pact Air Forces today imply some 10,000 Warsaw Pact combat sorties against central-western Europe on the first day of war in Europe.

- The increased accuracy (and range) of the SS-21, SS-22, and SS-23 short-range and medium-range ballistic missiles (see table) enables mounting of both conventional and chemical warheads, in addition to or instead of the nuclear warheads on the predecessor Frog-7, Scaleboard, and Scud-B models. Combined with enhanced performance of reconnaissance, target-identification, and fire-control, modern warheads and "smart" submunitions, the Soviet Union will have the capability to knock out NATO nuclear assets, air-defenses, air-bases, command, control, and communications centers without overstepping the "nuclear threshold."

Thus, while undercutting both NATO's nuclear deterrent and the backbone of its conventional defense, the Soviet Union would also be able to limit nuclear damage and contamination to the territory and population of conquered Western Europe. More important, such a Soviet capability, left

unencountered, is the equivalent of posing Western Europe with no choice but to surrender, three moves before "check-mate" is declared and demonstrated.

- Enhanced Soviet air defense and anti-missile defense, forward based, serve to make the "checkmate" more compelling, and will increasingly degrade the value of the British and French nuclear forces as well. Improved air-defense missiles, the SA-10 and SA-X-12, combined with the integrated area-coverage of Soviet missile-defense radar and fire-control, secure to the Soviet Union the capability to absorb and thin out aircraft and ballistic missile/cruise missile strikes by NATO, to the effect of complete nuclear and conventional dominance (not only superiority) over Western Europe.

The Köpke/Olshausen memorandum establishes five criteria to be met by an "extended European air-defense." 1) "It must be suited to the threat," designed to neutralize the additional conventional threat of the Warsaw pact. 2) "It must be appropriate," designed to meet the ballistic-missile threat as part of the entire spectrum of airborne threat. 3) "It must be jointly realizable in NATO," developed on the basis of existing integrated air-defense efforts. 4) "It must be economically feasible, i.e., the costs for the attacker must be higher than those of the defender." 5) "It must be realizable, i.e., the financial and personnel framework must be taken into account from the beginning."

Both the "conservative" and the "innovative" pathways will be limited at first to terminal point defense of essential

assets, consisting of the improved Patriot/Roland and tactical air-defense systems for close-up defense (Hawk). The "conservative" pathway would consist of active and passive air defense, with Offensive Counter Air operations, which would have to take account of the degrading effects of advanced Soviet measures. Rapid dispersion capabilities, with the corresponding C(3)I backup, hardening of C(3)I, bunkering, redundancy and other passive measures would bear the major weight of the effort to avoid subjecting essential assets to concentrated Soviet "saturation" fire.

### **'Innovative' pathway needed**

The "conservative" pathway, however, reveals points of basic vulnerability, which in turn define necessary crossover points to what is envisioned as "innovative," utilizing directed-energy and other SDI-associated technologies. The Patriot/Roland system outfitted also for an anti-missile-missile role makes more sense in Europe than equivalent systems in the United States as terminal point-defense, because the short- and medium-range missiles which Europe faces are not MIRVed (i.e., they lack multiple independent reentry vehicles), and warhead reentry speeds are slower, at about 3 km/sec, than the nearly 8 km/sec speeds of the reentry vehicles on ICBM warheads. However, the shorter flight times and lower trajectories of Soviet short- and medium-range missiles against Europe are also a compelling argument for the necessity of airborne or orbiting sensors for detection, target acquisition, and tracking.

Thus, even though Patriot anti-missile-missiles, for example, would be deployed in a terminal point-defense mode, they require sensing systems with broader area-coverage to be effective. The broader area-coverage of sensing systems is, in turn, one crossover to employment of directed-energy anti-missile/anti-aircraft weapons. Soviet progress in enhancing the accuracy of its weapons, as well as reconnaissance and target-acquisition in the future, will increase the Soviet capability to deliver saturation salvos against those targets provided with terminal point defense.

Within the Federal Republic of Germany, the main opposition party, the Social Democrats, opposes the extended European air defense conception. They argue that, since they want to have U.S. nuclear weapons removed from Western Europe, it makes no sense to set up a defensive system "for those American weapons." Yet, without such defense, the deterrent value of all nuclear weapons in Europe is degraded, and the Soviet Union would have the capability of bringing its nuclear and conventional superiority to bear against Western Europe with impunity.

Köpke and Olshausen speak to these considerations when they note that extended European air defense "must be conceived, so that it cannot be saturated with simple means nor paralyzed by electronic measures, since this is the only way to prevent additional assault forces from penetrating and achieving their aims."

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