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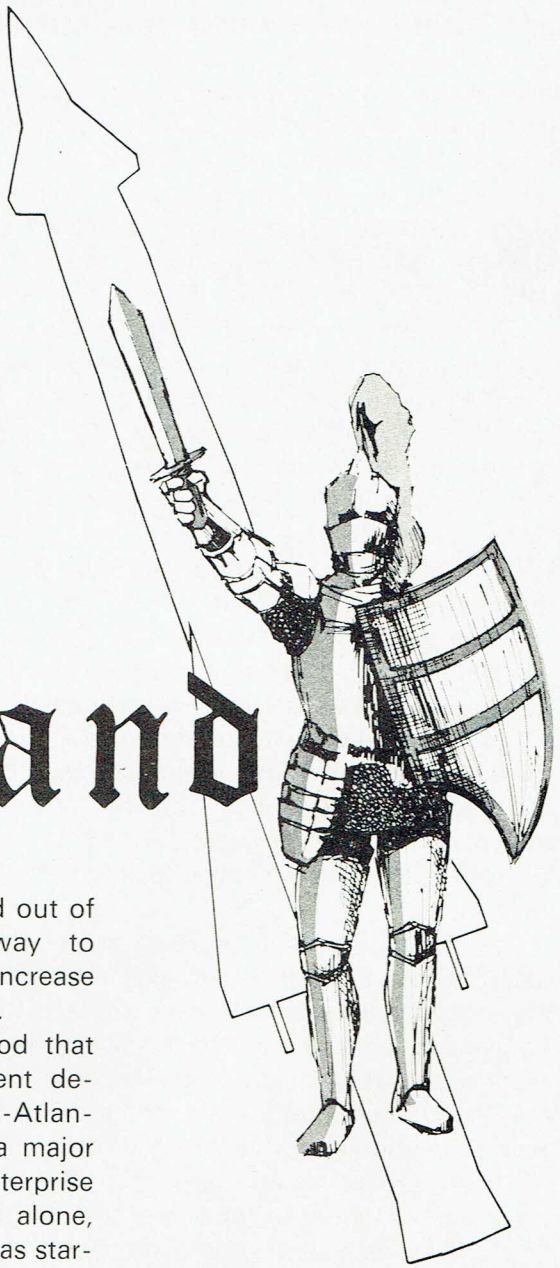
Chanson de Roland



1977 is a critical year for the North Atlantic Treaty Organization. The build-up in capability of the Soviet Union and its Warsaw Pact allies makes it imperative that NATO this year makes better use of its combined resources. In the opinion of most, the needed increase in efficient use of resources should be possible. But so far, despite much discussion in and out of NATO, a practical way to achieve that marked increase has not yet been found.

It must be understood that cooperation in armament development among trans-Atlantic nations represents a major change in our free enterprise system. Within Europe alone, extensive cooperation has star-

ted only in very recent times and significant cooperation in armament development across the Atlantic has been so sparse as hardly to be said to have started at all.

But an elaborate and long-standing system of technical interchange among NATO allies has substantially reduced the cost of background technology development. Despite this technology interchange across the Atlantic, however, co-development of major systems has seldom been achieved. So one must draw from this the conclusion that cooperative technology interchange alone is not enough to ensure subsequent co-development.

1976 was a year of search on the part of many nations for the political will to standardize. The frustrations which came during that year from not finding an easy solution must be interpreted to mean that trans-Atlantic cooperation is not a simple task. Our failure also means that simple exhortation will not work and that effective solutions are subtle and probably as yet not recognized.

The degree of economic interdependence in this field is traditionally dominated by the economic circumstances of the participants and by the cost and the urgency for the capability desired. We must realize that the present military and economic circumstances faced by allied countries are unusually complicated, and therefore it is not surprising that the route to cooperation is hard to find.

It has been repeatedly demonstrated that only by experimentation and observation of results can working solutions be found. And so it is the thesis of this article that we who seek cooperation must examine all examples where it has been tried, and learn from each of them. We must see which experiments succeed and which fail. Then we must extend the application of those techniques which produce the desired result, and put aside those which do not.

Important Experiment

Because of this need to learn from experience, I have chosen to write the story of one important experiment now underway. Called Roland, it seems to be working and may be an important technique for doing business in the future. Roland is in fact a new trans-Atlantic management technique of precedent-setting nature. Midway through its history, it seems to be succeeding in fundamentally satisfying ways which need to be better understood.

Roland is not a perfect example. Participants unfortunately do not include several prominent European arms producing nations, nor yet Canada. They do, however, include two large European nations, working in close and effective cooperation with the United States, with an equitable business arrangement for each . Roland is also working in a way that respects the special sovereign interests of the nations involved.

Two nations, the United Kingdom and Italy, have chosen solutions differing from Roland. It is not at all the intent of this article to judge the comparative merits of Rapier, M-E-I and Roland. In fact each will most likely be superior in the particular conditions for which it was designed. Rather, the thrust of this article is that when both sides of the Atlantic do agree on parameters, it should be possible to work on one implementation rather than two different designs.

Because of that importance, let me describe the programme more fully. Roland is the name of the short range, air defence system jointly initiated by France and the Federal Republic of Germany. It has recently been adopted by the United States and Norway. Roland is an optical or radar directed, command to line of sight, guided missile system developed by Euromissile, a consortium of French and German industrial interests. The basic technology of Roland, though strongly aided by the Alliance's system for the exchange of technical data, was developed by these industrial interests into a design especially applicable to countering the threat to NATO in Central Europe.

Work on the Roland system began as early as 1964 by initial concept verification, prototype development and testing. Now, some thirteen years later, Roland has finished production design and is into initial production testing. It is anticipated that European Roland will this year go into full production and start to be released to military units. Progress through this long development cycle has been steady. At this time there can be little doubt but that an effective weapon is soon to be ready for French and Federal German forces in the field.

Transatlantic Agreement

So far this story is not very different from other European cooperative programmes such as MRCA, Alpha jet and Jaguar. Unfortunately, in each of these cases there was no adoption by the United States.

What was different in Roland was that dedicated people on both sides of the Atlantic continuously and successfully sought economic, political and

The German Roland.

industrial compromise in order to encourage adoption of Roland by the United States.

Because of this European/American negotiation, the US, using entirely its own industrial base, is well on the way to the introduction of its own Roland system. Moreover, it will do so with estimated savings to the United States of upwards of 500 million dollars compared to the cost of developing its own system. Furthermore, American Roland will be interoperable and logistically interchangeable with the Roland system built in Europe. US Roland will be fielded in the early 1980s and will operate compatibly with French and German Rolands already in place.

The importance of this trans-Atlantic management achievement should not be overlooked. Although cooperation of this kind exists today on Hawk, the agreements setting up that cooperation were made two decades ago, before the capability existed for each side of the Atlantic to develop competitively different weapons for the same purpose.

To measure fully the success of Roland, one must compare its results to its desired objectives. Within Europe, two allies have cooperated in the development of a new system rather than compete with one another. As a result, the air defence assets of each nation will have a greater degree of operational interoperability. Moreover, common equipment will oblige these two countries to adopt more similar tactical doctrine in short range air defence. Other European nations may (as Norway already has) choose Roland for their own use. And, of course, by its selection of Roland, the tactical doctrine and hardware of the US will necessarily be influenced by the experience of its European partners.

The key management arrangements for trans-Atlantic use of Roland were simple but in a sense revolutionary. The United States Government selected US companies which agreed to pay equitable sums to the industrial representatives of the two European nations for their drawings, specifications, licences and experience. These data were the fruits of a costly prior work by France and Germany on Roland, and were

properly paid for by licence fees from the US. From the beginning, the three partners agreed "to seek on optimal level of standardization and interoperability of the Roland with the objective of maintaining a common configuration to the maximum extent possible". The United States was permitted by this agreement to build Roland for itself, using its own industrial base and contracting procedures. By agreement, the US was allowed to modify the Roland detailed

The French system.

components as long as operation and logistic interchangeability was maintained with the European design. The only exception to this rule was the more powerful tracking radar transmitter section to be used by the Americans. How well this overall agreement for interchangeability has worked can be seen from Figure 1. From an operational standpoint, there is no lack of interoperability; from a logistic point of view, there is very little difference in maintenance support.

Reasons for Success

In just a few months from now, missiles made on both sides of the Atlantic will be fired from launcher-fire-control unites of both configurations, and in a parallel test programme the US will prove to the Europeans the interchangeability of field replaceable spares of any origin.

The reason behind the anticipated success of Roland is that, for once, the fundamentally necessary criteria for success existed, along with a willingness to allow a good bargain for both sides. The "two-way street" which was accepted, was one of drawings, specifications and help from Europe in exchange for a reasonable fee (a low percentage of its total programme cost) from the United States.

Roland imposes no difficult balance of work offset arrangements which have previously complicated cooperative European and American programmes. In Roland, no country from one side of the Atlantic is asked to control the suppliers from the other, nor to try to impose its methods of doing business on the other. And to be sure, no country on one or other side of the Atlantic must commit itself to a fixed price while at the same time being obliged to use another country's suppliers, about which it knows little.

This way of doing business is the essence of the Roland example. Roland has satisfied the need for both cross-Atlantic dependence on a common design and the independence (for very many complicated reasons) of European and US production bases. Roland is truly an exception to today's general mode of doing business within NATO.

Using Roland as an example, other opportunities should be sought to put European designs into production in the United States, joined in the future, I would hope, by Canada. Before that can happen, however, the US Department of Defense must make some changes. It must find an administrative way to put into effect its long-

Figure 1: **INTERCHANGEABILITY BETWEEN US AND EUROPEAN VERSIONS**

(i) the US missile can be fired by European lauchers including French firing unit ROLAND I, and the European missile ROLAND II can be fired by US firing units;

(ii) complete interchangeability had been achieved for 420 firing post components and a total of 558 elements could be candidates for interchangeability at the third echelon;

(iii) the US have decided to conduct joint testing with the Europeans.

NOTE:
The vehicles used in the three countries are different; France selected AMX30, FRG the SP2, and US the M109.
Tracking radars and power supply units are different in the US and European versions.

standing, but yet largely unimplemented, regulations directing consideration of the products of its allies. Within the US Bureaucracy, powerful forces must represent a concerted US interest in the use of European designs. This could be achieved, and I hope that it will be soon, and in a way that is perceived as real by America's allies.

The US will also need to join its neighbour, Canada, in closer cooperative planning. These two American NATO allies must have a planning framework which can decide whether, on any given major programme, to cooperate in either development or procurement. This will need to be done so as to be able to present a common American entity with which Europe can cooperate.

Application of the Roland example to equipment coming from the other direction across the Atlantic is equally inviting. The recent very large US expenditures for research and development have not resulted in many of the products arising from these expenditures being adopted by its allies. Again the reasons are economic. It would seem that the only business propositions made to the European nations for use of the US products have been either marginally acceptable or not acceptable at all. And when for various reasons these propositions could be accepted, Europeans complain that US Foreign Military Sales regulations frequently cause disagreeable working relationships. It would seem that these situations need not occur.

If the US and Canada can offer their developments to Europe at a very early stage and can promise help while not insisting on direction, a European mirror image of Roland could develop. In this circumstance, Europe could modify for its production requirements selected US or Canadian products and thereby manage its own business, select its own supplier base, use its own procurement regulations and control its own costs.

To do this, however, Europe too must adapt its bureaucracy a little. In a sense, the same difficulty in the application of the Roland precedent exists in Europe, as it does in North America. There is no European agency which can receive, in the name of the European allies, a proposal from the United States and Canada. Likewise, there is no standing agency to negotiate on behalf of the NATO European allies. However, the independent European Programme Group might wish eventually to undertake this task although it is not now so chartered or disposed. I hope very much it can do so but, if not, some other agency must be designated because the US very badly needs an organization with which it can deal and which represents the armaments development interests of the European allies as a whole.

Chance for Cooperation

I certainly do not argue that it should be obligatory for the

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The COMECON headquarters in Moscow.

United States to adopt available European designs, nor that the European nations be obliged to adopt any existing American design. I do say, however, that there should be the chance for such a choice and that there should be a workable method for these options to get real consideration. There must be administrative agencies on both sides of the Atlantic that evaluate the appropriateness of adopting the designs of the other.

It may well be that the Roland technique is not the only way of cooperating. I personally hope that there can be many cases where nations on both sides of the Atlantic combine to design and then produce a single product. Probably, however, not all cooperation can be of that fully integrated kind. And therefore it seems likely that there will be many other cases where the example of Roland will be an instructive precedent.

As I said in the beginning of this article, the practicality of any method of arms cooperation can only be determined by the success of the relevant test cases. On this basis, Roland appears now to be a success and therefore merits continued evaluation. But we in NATO have, in the main, been ignoring Roland. We should not. It is a successful example of cooperation in a period which has had very few other successes.

The original version of this Chanson de Roland is as old as middle European literature. It told of heroes, battles and desperate days. It told of a message to Charlemagne sent by the great horn of Roland. Today, within the NATO Alliance, these are what many consider desperate times and, once again, there is a message from Roland. Though it is a message still being written, may we be wise enough to read it accurately and, as did Charlemagne, respond. ◆

ON: PROGRESS AND PROSPECTS

Report on the Sixth NATO Colloquium

AS in the case of each of the last five years, a non-governmental meeting was held at the NATO headquarters, under the aegis of the NATO Directorates of Information and Economic Affairs, to study a specific aspect of the Soviet and East European economies. The symposium, held from 16-18 March, was entitled "COMECON: Progress and Prospects", and was mainly concerned with evaluating progress towards COMECON integration as called for in the ambitious "Complex Programme" of the 25th COMECON session at Bucharest in 1971. Papers were presented at the symposium on the role of centrally planned economies; the process of integration and its relation to the technical problems of pricing, financing and trade flows within COMECON; as well as on possible developments over the next five years including the likely extent of Soviet influence.

The meeting was attended by eminent academics specialising in the economies of the USSR and Eastern Europe, together with representatives from governments, the OECD, business and the press. The inaugural session was presided over by Dr Joseph Luns, Secretary General of NATO, and the working sessions by Monsieur Jacques Billy, Director of NATO's Economic Directorate.

Progress on Integration

The quest for integration within the Soviet sphere of influence dates back to the height of the cold war. In January, 1949, COMECON[1] was established in Moscow to counteract

[1] Current members are the USSR, Bulgaria, Czechoslovakia, Hungary, GDR, Poland, Romania, Mongolia, Cuba, with associate member status given to Yugoslavia.