CRISIS RECONNAISSANCE REQUIREMENTS AND
THEIR IMPACT ON RECONNAISSANCE SYSTEM DESIGN

SUMMARY

This paper draws from an analysis of six past
crisis situations and the special needs of each for
overhead reconnaissance in order to place relative
values on the reconnaissance system characteristics
of (a) resolution, (b) targeting flexibility, (c) area
coverage capability, (d) repetition of coverage, (e)
sustainability, (f) responsiveness and (g) timeliness
of data return. Its purpose is to provide guidelines
for assessing the utility of the various limited capa-
bility "crisis management" systems that have been pro-
posed and to provide a basis for design trade-offs within
EOI systems currently under study for more general applica-
tions of indications and warning, crisis reconnaissance
and surveillance.

Attached to this synopsis are six separate papers
describing in turn the Mid-East Ceasefire, the 1970
Jordan Crisis, the Czech Invasion, the 1962 Cuban Missile
Crisis, the 1970 Cuban Sub Base Question and the Pueblo
Capture.

In brief, an analysis of these papers shows that
in all cases image resolution of about two feet or
better was required to make crucial equipment identifi-
cations. Image quality poorer than this would not have
served the needs of the analyst or the policy maker.
Because the analyst is primarily interested in watching
the situation develop at known points of potential
military activity, such as missile sites, airfields,
marshalling areas, etc., most of his needs can be met by
covering an array of distributed small area or point
targets at this high resolution. And because of his
constant concern that a seeming localized crisis situa-
tion may involve or provoke action in the Soviet Union
or China, he is always anxious to have frequent coverage
of "indications and warning" targets throughout these
countries. These targets are also small area targets
requiring high resolution (two feet or so) imagery.

There were some crises during which there was a
need for monitoring or searching larger areas for new
activity. However, provided that a capability existed
to cover points of identified activity with high
resolution, this search could have been accomplished
with low (5-10 foot) resolution. These areas were always

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less than 3000 square miles in extent. In general, then,
where a trade-off has to be made between resolution and
targeting flexibility on one hand and wide area coverage
on the other, resolution and flexibility should dominate.

With regard to repetition frequency, sustainability
and responsiveness, the repetition requirement varied
between twice a week and once a day, with the daily
requirement holding when situations grew more urgent.
This rate of coverage was sometimes required for weeks
or months although in two cases the crisis ran its course
in a matter of days. Likewise, two of the crises
required launch of a reconnaissance system within 24 hours
or so of the first indication of trouble, while others
were building for days or weeks.

Finally, there is already a considerable variation
to be found in the need for timeliness in data return.
During the routine days of the Mid-East ceasefire, for
example, a turn around time of several days was
satisfactory. However, there were occasions when the
data would have been valuable if it had been available
much sooner. This would have certainly been true if
hostilities had erupted. The best measure of this
requirement in the case of a truly urgent crisis is

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demonstrated in the cycle of collection, analysis and
reporting that occurred during the 1962 Cuban missile
crisis when a report of the current situation was
required to be on the President's desk at 7:00 a.m. each
morning, and on the basis of this report decisions were
made about the targeting of that day's reconnaissance
operations.

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