

P. Rye

MIT/IL SOFTWARE ANOMALY REPORT

REPORT NO.	ILNY 77
PROGRAM	LUMINARY
PROGRAM REVISION	99

1.1 ORIGINATOR: C. Schulenberg	1.2 ORGANIZATION: MIT/IL	1.3 DATE: 6/18/69	1.4 ORIGINATOR CONTROL NO.
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1.5 DESCRIPTION OF ANOMALY:
 It is possible for all computer activity governed by the TIME3 interrupt structure (i. e., Waitlist) to be suspended for a period of about 163 seconds following the selection of P70 by means of the abort button or P71 by means of the abortstage button. The problem develops in the following manner: R11 (abort-discretes monitor) together with R10 (landing-analog displays routine) form a task under TIME3 interrupt control which is executed every...
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1.6 DESCRIPTION OF RUN:
 Discovered and analyzed by TRW Systems.
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- MIT ANALYSIS -

2.1 CAUSE:
 Software restarts do not initialize the TIME3 register.
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2.2 RECOGNITION:
 When the abort button is pushed the DSKY will always blank within about a half-second. Then major mode, 70 or 71, will quickly appear in the mode lights.
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2.3 MISSION EFFECT:
 If avoidance procedure #1 is used there would be no mission effect beyond requiring more time of the astronaut in selecting an abort program.
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2.4 AVOIDANCE PROCEDURE:
 There are in this instance two possible types of avoidance procedures. The recommended avoidance procedure is to select the aborts via V37 and then...
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2.5 RECOVERY PROCEDURE:
 A recovery procedure is not recommended since by the time recognition of the problem is made, the LGC would have, in general, been stalled for so long a...
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2.6 PROGRAM CORRECTION:
 Recode software restart logic so that TIME3 (and for consistency, TIME4 and TIME5) is initialized in the same manner as in the logic activated by a hardware restart.
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2.7 RECOMMENDED DISPOSITION (Fix, Work-around, etc):
 Fix in 1 module re-release of LUMINARY 1A (LMY 99, Rev. 1)
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2.8 RECOMMENDED RE-TESTING:
 A Digital run should be made with P70 selected and TIME3 forcibly set to a small number.
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2.9 MIT/IL SIGNATURE: <i>George W. Cherry</i>	2.10 DATE: 6/23/69
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3.1 NASA DIRECTION:

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4.1 CLOSING ACTION TAKEN:

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3.2 NASA/MSC SIGNATURE:	3.3 ORGANIZATION	3.4 DATE:	4.2 SIGNATURE:	4.3 ORGANIZATION	4.4 DATE:
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