

WAAS Technical Report
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DR#2: Type 6 alert (changed only one satellite's UDREI)
GPS Week/Day: Week 1321 Day6 (5/7/2005)

Discussion:

One type 6 alert was sent out by both AORW and POR on week 1321 day 6 from time 604271-604274. The alert changed only the UDREI of PRN 134 from 13 to 14 for both AORW and POR. This anomaly had no effect on the WAAS SIS performance in either PA or NPA.

Table 1.1 AORW T6 SV Alerts

PRN	Start Time	Stop Time	Previous UDREI	Current UDREI	Alert	Message Type
1	604271	604274	5	5	No	T6
2	604271	604274	14	14	No	T6
3	604271	604274	14	14	No	T6
4	604271	604274	14	14	No	T6
5	604271	604274	6	6	No	T6
6	604271	604274	14	14	No	T6
7	604271	604274	13	13	No	T6
8	604271	604274	14	14	No	T6
9	604271	604274	14	14	No	T6
10	604271	604274	14	14	No	T6
11	604271	604274	5	5	No	T6
13	604271	604274	14	14	No	T6
14	604271	604274	5	5	No	T6
15	604271	604274	14	14	No	T6
16	604271	604274	11	11	No	T6
17	604271	604274	14	14	No	T6
18	604271	604274	7	7	No	T6
19	604271	604274	14	14	No	T6
20	604271	604274	7	7	No	T6
21	604271	604274	14	14	No	T6
22	604271	604274	5	5	No	T6
23	604271	604274	11	11	No	T6
24	604271	604274	12	12	No	T6
25	604271	604274	5	5	No	T6
26	604271	604274	14	14	No	T6
27	604271	604274	14	14	No	T6
28	604271	604274	14	14	No	T6
29	604271	604274	14	14	No	T6
30	604271	604274	5	5	No	T6
31	604271	604274	14	14	No	T6
122	604271	604274	11	11	No	T6
134	604271	604274	13	14	Yes	T6

Table 1.1 POR T6 SV Alerts

PRN	Start Time	Stop Time	Previous UDREI	Current UDREI	Alert	Message Type
1	604271	604274	5	5	No	T6
2	604271	604274	14	14	No	T6
3	604271	604274	14	14	No	T6
4	604271	604274	14	14	No	T6
5	604271	604274	6	6	No	T6
6	604271	604274	14	14	No	T6
7	604271	604274	13	13	No	T6
8	604271	604274	14	14	No	T6
9	604271	604274	14	14	No	T6
10	604271	604274	14	14	No	T6
11	604271	604274	5	5	No	T6
13	604271	604274	14	14	No	T6
14	604271	604274	5	5	No	T6
15	604271	604274	14	14	No	T6
16	604271	604274	11	11	No	T6
17	604271	604274	14	14	No	T6
18	604271	604274	7	7	No	T6
19	604271	604274	14	14	No	T6
20	604271	604274	7	7	No	T6
21	604271	604274	14	14	No	T6
22	604271	604274	5	5	No	T6
23	604271	604274	11	11	No	T6
24	604271	604274	12	12	No	T6
25	604271	604274	5	5	No	T6
26	604271	604274	14	14	No	T6
27	604271	604274	14	14	No	T6
28	604271	604274	14	14	No	T6
29	604271	604274	14	14	No	T6
30	604271	604274	5	5	No	T6
31	604271	604274	14	14	No	T6
122	604271	604274	11	11	No	T6
134	604271	604274	13	14	Yes	T6

Conclusion:

As shown on the table above, the Type 6 alert changed only one satellite's UDREi for both AORW and POR. WAAS requirements do not allow for a Type 6 alert message unless more than one satellite is being alarmed. WAAS C&V software requirements spec (SRS): "If the total SV Alarms that are set "on" exceed the number of satellites that can be scheduled in a single Fast Corrections message (Types 2-5 or Type 24), then a UDRE Integrity Information (Type 6) message shall be scheduled for the next 1-second interval."