



subject: **Change to *bputil*.**

date: **November 5, 1999**

from: **BNS-2000 Customer Support
1800WE2CARE**

PRODUCT DOCUMENTATION NOTICE

This memo describes changes made to the **bputil** command in BNS-2000 Release 5.0.

The **bputil** command would sometimes display negative values in the *Total Words* column of a *Backplane Utilization Report*. This was caused by the fact that the sleep interval is accurate only to one-60th of a second, whereas switch backplane null packet counts are updated much more frequently. **bputil**, therefore, would sample the counts before and after an interval i where $59/60$ seconds $\leq i \leq 61/60$ seconds, but would perform its calculations based on an interval of exactly one second.

bputil has been changed to time its interval using the RISC "tick counter" on the 68360 Communications Controller chip, which is (set to be) accurate to one-6000th of a second. This change assures much more accurate results, because the totals are computed relative to the "true" elapsed time rather than to the selected (cruder) interval.

A '-r' option has been added to the **bputil** command so that the user can see the exact number of 6000ths of a second that expired during an interval if, for any reason, that information would be of interest. The exact elapsed time is display in parentheses at the end of each line if a '-r' is coded. An example follows immediately below:

```
UTILITY> bputil -i10 -r
```

```
Backplane Utilization Report started at Wed Nov  3 15:28:31 1999
```

```
100% Utilization = 6002400 Total Words (for 1 second period)
```

Time	Total Words	Bits/sec	Backplane Util	
15:28:32	4650	148800	0.0775%	(5999)
15:28:33	4090	130880	0.0683%	(5982)
15:28:34	3790	121280	0.0633%	(5981)
15:28:35	4095	131040	0.0684%	(5982)
15:28:36	4520	144640	0.0755%	(5982)
15:28:37	4370	139840	0.0730%	(5982)
15:28:38	4390	140480	0.0734%	(5982)
15:28:39	3820	122240	0.0638%	(5982)
15:28:40	4660	149120	0.0779%	(5982)
15:28:41	4495	143840	0.0751%	(5982)

```
UTILITY>
```