

S9000 ASAP binning constructs (syntax and underlying data structure)

```
typedef struct bin_map_block {  
    char *name;  
    short num_vmap;  
    short num_hmap;  
    Vmap *vmap; /* list of vmaps */  
    Hmap *hmap; /* list of hmaps */  
} Bin_map_block;
```

```
typedef struct {  
    long vbin;  
    long hbin;  
    long count_val;  
    long wafer_val;  
    short lot_alarm_val;  
    short wafer_alarm_val;  
  
    char *counter;  
    short max_cnt;  
    short consec_cnt;  
    short wafer_max_cnt;  
    short dummy;  
} Vmap;
```

```
typedef struct {  
    long hbin;  
    long retest;  
    long count_val;  
    long wafer_val;  
    short lot_alarm_val;  
    short wafer_alarm_val;  
  
    char *counter;  
  
    short flags; /* 0=none */  
                /* 1=passing hbin */  
                /* 2=failing hbin */  
  
    short max_cnt;  
    short consec_cnt;  
    short wafer_max_cnt;  
} Hmap;
```

```
bin_map ctg_map {  
    <04:16:1993 10:24:26>,  
    CLEAR_CONSEC = WAFER_LOT,  
    VIRTUAL_MAP = {  
        { MAP = 1 > 1, COUNTER = "p_best_part" },  
        { MAP = 10 > 10, COUNTER = "fo_signal_opens" },  
        { MAP = 11 > 11, COUNTER = "fs_power_shorts" },  
        { MAP = 12 > 12, COUNTER = "fs_signal_shorts" }  
    },  
    HARDWARE = {  
        { BINS = 1, RETEST = 0, COUNTER = "AA", BIN_TYPE = PASS },  
        { BINS = 10, RETEST = 0, COUNTER = "ZC", BIN_TYPE = FAIL },  
        { BINS = 11, RETEST = 0, COUNTER = "ZP", BIN_TYPE = FAIL },  
        { BINS = 12, RETEST = 0, COUNTER = "ZS", BIN_TYPE = FAIL }  
    }  
}; /* end of BIN_MAP ctg_map */
```

```

typedef struct {
    char *name;
    /* Define the tree roots for each type of block. */
    Bins_block *bins_tree;
    Bin_map_block *bin_map_tree;
    Bins_block *curr_bin;
    Hmap *hbin;          /* for prober/handler */
                        /* Do NOT change the order of the following */
    Bin_map_block *curr_bin_map;
    Summary_block *curr_summary;
    long curr_virtual_bin;
    long total_bit_bin;
    long eot_virtual_bin;
                        /* End of ordering restriction */

    Result result;       /* test results */
    long device_count;
    long device_fails;
    short retest;
    Vmap *vbin;
    short alarm_flags;
} PROGRAM;

```

```

/* Bins block is assigned at */
/* flow node entry or exit ports */
/* Test program keeps track of */
/* most recently assigned bin block */

```

```

typedef struct bins_block {
    char *name;
    long virtual_bin;
    long bit_bin;
} Bins_block;

```

```

bins p_good_part {
    <06:14:1910 11:24:52>,
    VIRTUAL_BIN = 3,
    BIT_BIN = 0
}; /* end of bins p_good_part block */

```

Current Vmap and Hmap structures.
These are updated each time a new bin is assigned