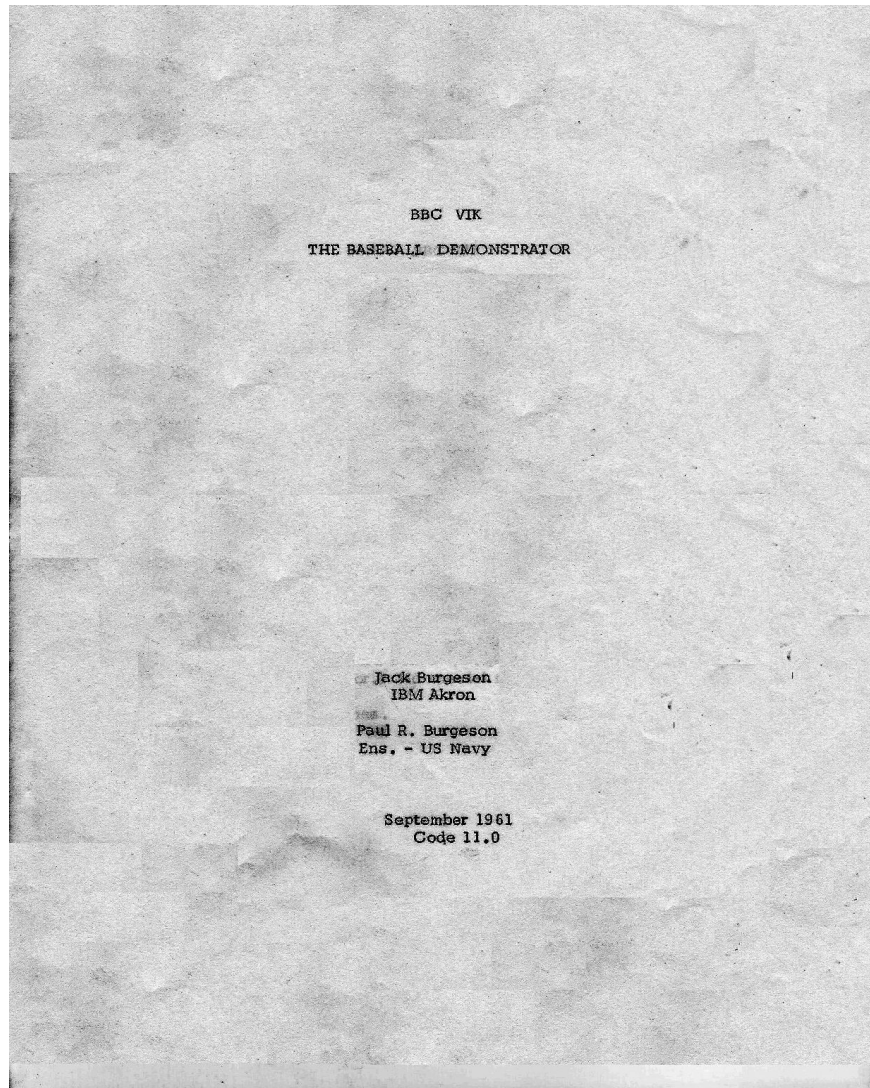
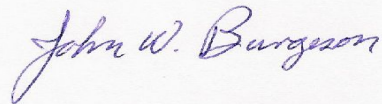


## BBC Documentation

This is a photocopy of the documentation of BBC, a baseball simulator that runs on the IBM 1620 computer. John W. Burgeson, an IBM Applied Science Rep in Akron, Ohio, developed it in 1960-61. The earliest successful run of this program was, according to notes, on 1/3/61. John submitted it to the IBM 1620 program library where various versions of it existed as late as 1967. This paper is dated September 1961. In the fall of 1961, Rege Cordic, then a KDKA Pittsburgh radio executive, produced a short running radio show based on the simulator's output.

John's brother, Paul R. Burgeson, served as a "debugger" on the project and offered many design ideas. He was the one who urged the development of the program and without his able assistance, it would not have ever been completed.



ABSTRACT PAGE

BBC VIK  
THE BASEBALL DEMONSTRATOR

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IBM Akron

Paul R. Burgeson  
Ens. U.S. Navy

Subject Class: 11.0

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Purpose: To demonstrate the capabilities of the 1620 as a simulator by "playing" a game of baseball.

Storage: All of storage is used.

Equipment: 20K memory card 1620. (A tape version VIK is also available from the author.) No special features required.

Language: SPS with patches.

BBC VIK PROGRAM DESCRIPTION

This demonstration program will match operator vs machine in picking teams from a master roster (in 1620 memory) of 90 all-star players. Operator picks visiting team, the machine then selects (randomly) the home team. A complete game is then "played." Running time is from 7 to 11 minutes per game. The batting average and handedness of the batter is taken into account in playing the game. All pitchers are considered equally effective.

Two separate random number generators built into the program effectively prevent the same game - or even close variations - from recurring. These generators are altered each time the program is loaded by the operator typing the date and time of day into memory, the program selecting certain digits from this type in.

Because of the high averages of the all-stars on the roster (each player is represented by his best year average-wise), most games are high scoring. However, shutouts have occurred. In one game Bob Feller pitched a 3 hitter, winning 5-0. He then lost the next game 14-11.

No flow chart or listing is available for this program. An 80-80 listing of the program deck gives a map of memory from 00160 to 19999.

The game has been tested over about 50 games so far, about 10 games since the last patches were made. No apparent errors exist. This version VIK adds base stealing, hit by pitcher, and a more realistic base running situation to the first early tape BBC version.

Input/Output/Operating

To run BBC VIK, push reset, put program deck in read hopper - push load. During loading a message will be typed out indicating the version of BBC being used.

After completion of loading the typewriter will carriage return several times and type out "TODAY'S DATE IS" and wait for the operator to type in the date or any other garbage he may want to type in up to 30 characters. Release - start - the message "THE TIME IS" appears. Same procedure, then the typewriter will prepare headings for the visitors roster. Tab stops of approximately 40 and 70 are convenient here. (Margin at 20).

When the typewriter stops, the operator types in the last name of his lead-off batter-release start. If he is one of the 90 - his record will appear. Otherwise the operator will be asked to make another choice. After nine players have been entered, the 1620 program completes the job, selecting the home team and playing the game.

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At the conclusion of the game, after the game totals are typed, sense switch 3 determines whether the same two teams will play another game (off) or if the operator will enter a new visiting team lineup (on).

Sense Switch 1 on will inhibit some type out of where runners are on the bases.

Sense Switch 2 on will force a hit by the current batter.

Sense Switch 4 on will force a non-hit by the current batter unless switch 2 is on.

All output is typewritten. There are no stops in the program.

#### Roster of Players

The roster of 90 players begins in location 13500 and extends to 17999. To print this roster, load the program, put the following routine in Insert and Start:

```
34 0000 00102
39 13501 00100
11 00018 00050
49 00000
```

The program begins in 02326 if you wish to enter new teams; 04490 to play a game with the current teams.

To pre-select both teams, stop the machine after the visiting team has been selected. Insert into locations 01937 - 01981 a series of 9 flagged 5 digit numbers, each number being the location of the player's record in memory that you wish to play on the home team. To determine this location - type the roster (as above). Player #1 is location 13500, #2 is 13550, and so on to 18950 for player #90. When the home team roster is entered in this manner, branch to 04490.

J. W. Burgeson  
P. R. Burgeson

JWB:PRB:css

BBC VERSION 1K 8/14/61

*- last version date*

TODAYS DATE IS 9/11/61

*- date this game was played*

THE TIME IS 1..00 OR THEREABOUTS

ENTER YOUR LINEUP BELOW

VISITORS

| NAME     | TEAM          | AVG  | BATS |
|----------|---------------|------|------|
| RUTH     | LF 1923 YANKS | .393 | L    |
| CROSSETT |               |      |      |

NON-VALID PLAYER. RETRY.

|          |                 |      |   |
|----------|-----------------|------|---|
| CROSSETT | SS 1936 YANKS   | .288 | R |
| HEGAN    | C 1947 CLEVE    | .249 | R |
| TROSKY   | 1B 1936 CLEVE   | .343 | L |
| GORDON   | 2B 1942 YANKS   | .322 | R |
| WAGNER   | SS 1900 PITTSBU | .381 | R |
| WILLIAMS | LF 1941 RED SOX | .406 | L |
| SPEAKER  | CF 1925 CLEVE   | .389 | L |
| GROVE    | P 1931 ATHLETI  | .250 | L |

HOME TEAM

| NAME      | TEAM            | AVG  | BATS |
|-----------|-----------------|------|------|
| BROUthers | 1B 1887 DETROIT | .419 | L    |
| HORNSBY   | 2B 1924 CARDS   | .424 | R    |
| KAMM      | 3B 1928 W SOX   | .308 | R    |
| TRAVIS    | SS 1941 WASHING | .359 | L    |
| MEDWICK   | LF 1937 CARDS   | .374 | R    |
| AVERILL   | CF 1936 CLEVE   | .378 | L    |
| HAMILTON  | RF 1894 PHILS   | .398 | R    |
| HARTNETT  | C 1937 CUBS     | .354 | R    |
| RADBOURNE | P 1884 PROVIDE  | .250 | R    |

RUTH UP STRUCK OUT SWINGING  
CROSSETT UP SINGLE TO RIGHT

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HEGAN UP STRUCK OUT CALLED  
TROSKY UP RUNNER OUT STEALING SECOND

0 RUNS 1 HITS 0 ERRORS

BROUTHERS UP STRUCK OUT SWINGING  
HORNSBY UP GOUNDER TO FIRST  
KAMM UP GOUNDER TO THIRD

0 RUNS 0 HITS 0 ERRORS

END OF 1 SCORE 0 0

TROSKY UP STRUCK OUT SWINGING  
GORDON UP LINE DRIVE TO SHORT  
WAGNER UP BASE ON BALLS  
WILLIAMS UP TEXAS LEAGER SINGLE TO CENTER RUNNERS ON 1ST AND 3RD  
SPEAKER UP STRUCK OUT SWINGING

0 RUNS 1 HITS 0 ERRORS

TRAVIS UP DOUBLE TO RIGHT  
MEDWICK UP STRUCK OUT SWINGING  
AVERILL UP LONG FLY TO L CENTR RUNNER ON 3RD  
HAMILTON UP GOUNDER TO PITCHER

0 RUNS 1 HITS 0 ERRORS

END OF 2 SCORE 0 0

GROVE UP STRUCK OUT SWINGING  
RUTH UP GOUNDER TO SECOND  
CROSETTI UP LINE DRIVE TO SHORT

0 RUNS 0 HITS 0 ERRORS

HARTNETT UP FLY BALL TO R CENTR  
RADBOURNE UP FLY BALL TO R CENTR  
BROUTHERS UP LINE DRIVE TO THIRD

0 RUNS 0 HITS 0 ERRORS

END OF INNING 3 SCORE 0 0

HEGAN UP GOUNDER TO SHORT  
TROSKY UP LONG FLY TO L CENTR  
GORDON UP GOUNDER TO SHORT

0 RUNS 0 HITS 0 ERRORS

HORNSBY UP GOUNDER TO SHORT  
KAMM UP STRUCK OUT SWINGING  
TRAVIS UP LONG FLY TO CENTER

0 RUNS 0 HITS 0 ERRORS

END OF INNING 4 SCORE 0 0

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WAGNER UP LINE DRIVE TO SHORT  
WILLIAMS UP SINGLE TO RIGHT  
SPEAKER UP LINE DRIVE TO FIRST DOUBLE PLAY

0 RUNS 1 HITS 0 ERRORS

MEDWICK UP SINGLE TO LEFT  
AVERILL UP FLY BALL TO R CENTR  
HAMILTON UP INF. HIT TO SHORT  
HARTNETT UP LONG FLY TO CENTER RUNNERS ON 1ST AND 3RD  
RADBOURNE UP LONG FLY TO R CENTR

0 RUNS 2 HITS 0 ERRORS

END OF INNING 5 SCORE 0 0

GROVE UP DOUBLE TO R CENTR  
RUTH UP SINGLE OVER FIRST RUNNERS ON 1ST AND 3RD  
CROSETTI UP GROUNDER TO SHORT BATTER SAFE AT FIRST RUNNER OUT AT HOME RUNNER  
S ON 1ST AND 2ND  
HEGAN UP GROUNDER TO THIRD DOUBLE PLAY

0 RUNS 2 HITS 0 ERRORS

BROUTHERS UP LONG FLY TO LEFT  
HORNSBY UP GROUNDER TO PITCHER  
KAMM UP LONG FLY TO R CENTR

0 RUNS 0 HITS 0 ERRORS

END OF 6 SCORE 0 0

TROSKY UP ERROR AT SECOND  
GORDON UP GROUNDER TO THIRD RUNNER ON 2ND  
WAGNER UP FOUL OUT TO RIGHT  
WILLIAMS UP POP FLY TO FIRST

0 RUNS 0 HITS 1 ERRORS

TRAVIS UP STRUCK OUT SWINGING  
MEDWICK UP STRUCK OUT SWINGING  
AVERILL UP SINGLE TO L CENTR  
HAMILTON UP RUNNER STEALS SECOND  
FOUL OUT TO SHORT

0 RUNS 1 HITS 0 ERRORS

END OF 7 SCORE 0 0

SPEAKER UP STRUCK OUT SWINGING  
GROVE UP STRUCK OUT SWINGING  
RUTH UP SINGLE OVER THIRD  
CROSETTI UP SINGLE TO R CENTR RUNNERS ON 1ST AND 2ND  
HEGAN UP GROUNDER TO SHORT

0 RUNS 2 HITS 0 ERRORS

HARTNETT UP STRUCK OUT CALLED  
RADBOURNE UP STRUCK OUT SWINGING  
BROUTHERS UP SINGLE OVER 2ND

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HORNSBY UP SHORT FLY TO RIGHT

0 RUNS 1 HITS 0 ERRORS

END OF INNING 8 SCORE 0 0

TROSKY UP HOMER TO RIGHT  
GORDON UP GROUNDER TO PITCHER  
WAGNER UP DOUBLE TO CENTER  
WILLIAMS UP DOUBLE TO R CENTR RUNNER SCORES  
SPEAKER UP SHORT FLY TO LEFT  
GROVE UP GROUNDER TO THIRD

2 RUNS 3 HITS 0 ERRORS

KAMM UP LONG FLY TO R CENTR  
TRAVIS UP INF. HIT TO THIRD  
MEDWICK UP RUNNER STEALS SECOND  
LINE DRIVE TO PITCHER DOUBLE PLAY

0 RUNS 1 HITS 0 ERRORS

END OF 9 SCORE 2 0

GAME COMPLETED. TOTALS

|          |    |    |    |
|----------|----|----|----|
| VISITORS | 02 | 10 | 00 |
| HOMETEAM | 00 | 06 | 01 |