Sinclair QL Retro Gaming

QBITS Pandemic

As Chief Medical Advisor to the World Health Organisation (WHO) a team of Specialists are assembled to help you fight a new and Deadly Virus. Your aim is to Contain the Outbreak, Find a Cure, Vaccinate the Population and Eradicate the Disease.

Researcher
Dispatcher
Planner
Operations

WHO Specialists

Quarantine
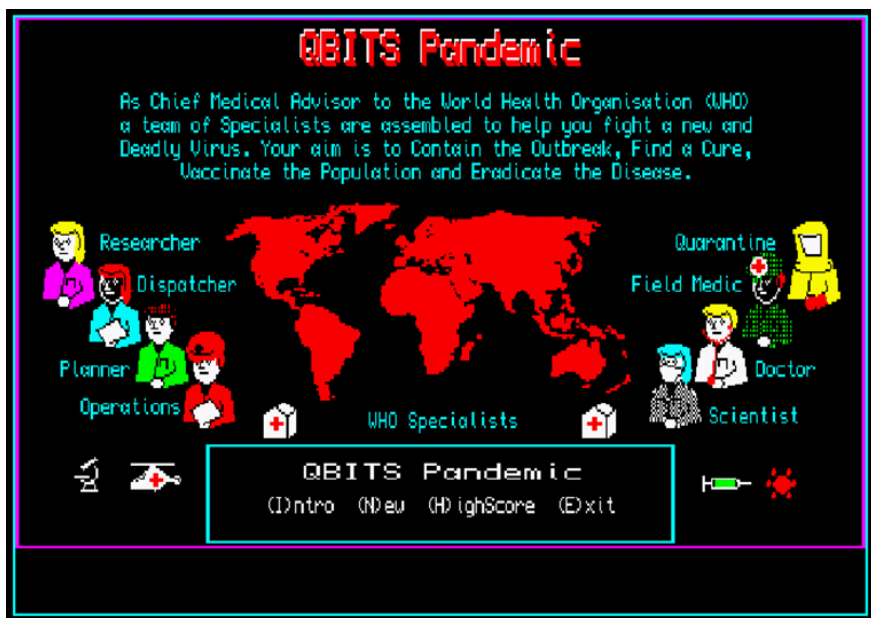Field Medic
Doctor
Scientist

QBITS Pandemic
(I)ntro (N)ew (H)ighScore (E)xit

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QBITS Introduction

To maintain a semblance of backward compatibility my S/SuperBASIC Retro Progs are kept within the BBQL Mode 4 screen size of 512x256 pixels. However, to run QBITS Program code you will need expanded memory and Tool Kit 2. The Progs will be relatively slow as they are not optimised for speed running under the QL Basic interpreter. If you have the means and inclination, compiling the programs may provide some improvements.

For writing/checking my **QBITS code** I use versions of the **QL2K** & **QPC2** emulators, both run on a modern computer platform where the performance is a 100 or more times faster than that of a compiled **BBQL** Prog.

QBITS Game Conjecture

Games test our abilities and maybe even educate us by reflecting upon an environmental and/or mental disposition. They can expand our horizons, but also be just an escape and rewarding form of entertainment. I often hear the term 'Learn the Rules - Master the Game'. I acknowledge this to mean keep the game rules and direction of flow relatively easy, but with enough variables to form elaborate complexities such as in the Game of Chess.

A Game must comply with the rules and be played within the environment it is designed around. A Game must have an end goal, to which it progressively flows towards, and hence has **direction**. The Interactive components, **hazards**, **actions** and **events** are those that direct the Game to its ultimate conclusion, to win or lose. To further test the skill and determination of a player **boundaries** can be set, time limits, or countdowns, a depleting number of **Turns**, or reducing strengths of a **Fiscal** nature, **Energy** level or simply **Lives** lost.

QBITS 2020 Challenge

Looking to code a new **QBITS Retro Game** you might have guessed following the lockdown with Covid19 that **Pandemics** became my theme. This began with an idea in the form of a simple statement. **QBITS Pandemic** – the World Health Organisation (WHO) and a team of Specialist set out to Contain the Spread, find a Cure and Vaccine to Eradicate a Deadly Virus.

My starting point being a World Map with 48 City areas with an initial **Outbreak**, then for more city areas to be infected as the game progresses. The Challenge was determining a level of difficulty by varying the number of **Turns**, **Hazards**, **Events** and **Actions**. This all ties into the ability of a player being able to develop a Game **Strategy** from the opportunities presented and so greatly increase the enjoyment of playing and determining the chances of winning.

Artwork began with a **World** & **City Map**, to this I added an **Outbreak** Tracker, **Infection Rate** and **Status** a Countdown of Turns and Infected City Recorder. Activity was represented by **Specialists** (Players) and a number of **Events** and **Actions** identified with graphic images.

QBITS Pandemic Intro
The Program opens with a Menu:-
(**I**)ntro (**N**)ew (**H**)ighscore (**E**)xit

Key '**I**' Introduction and a Mission
Statement is displayed outlining the
nature of the Game.

The World Map, WHO Specialists
and other images are scalable and
use the QL S/SuperBASIC Graphic
commands. Four out of the eight
Specialists are randomly chosen to
become the team for each game.
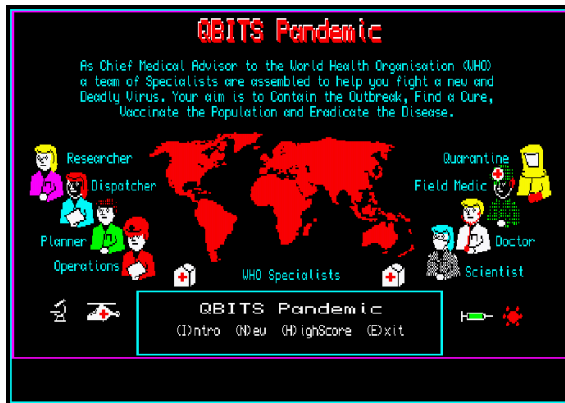
SPECIALISTS: Operations Planner Dispatcher Researcher Scientist Doctor Field Medic Quarantine

QBITS Pandemic Strategy
The opening rounds are Containment and acquiring **RES**earch credits to activate the release of a
Vaccine, this is a top priority. Any Specialist with 5 credits can release the Vaccine but only
when they are stationed in a City with a **MED Centre**. The exceptions to this rule are the
Researcher who only requires 4 credits and the **Doctor** who with 5 credits can release the
Vaccine from any city. Once a **Vaccine** is released then the Virus **Spread** is halted, but then it
becomes a race to clear all cities of infection before running out of **Turns**.
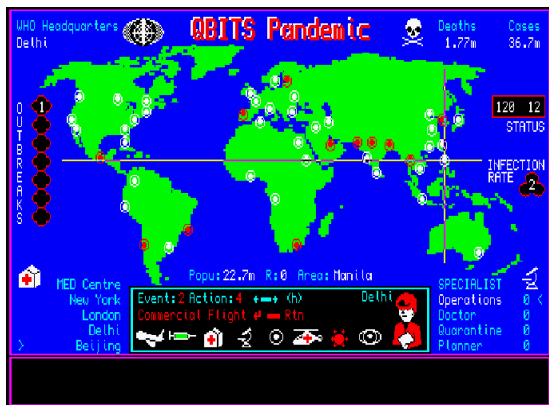
QBITS Pandemic Game Screen
The headings across the top show the selected **WHO Headquarters,** which remains the city of
choice at the beginning of each game. Centre page is the **QBITS Title**, followed by the
accumulated **Deaths** and confirmed **Cases** which are updated as the game progresses.

Down the left side is the **OUTBREAKS** tracker and below this the 4 relocatable **MED** centres.
Each time a **MED** centre is Built in an Infected city the **R:** rate is cleared (**R:0**).

On the right side of the screen a **STATUS** Box shows the number of **Turns** left to play and
Cities that are still Infected. Below this is the **Infection Rate indicator** which scales up each
time an **Epidemic** is released in a City area. This controls the number of Cities selected for
further Infection Increases at the end of each turn until a **Vaccine** Release. If the **R:** factor of a
city exceeds 3 then the linked cities **R:** rates are raised by 1. If any of the linked city **R:** rates
rise above 3 this can trigger a cascade of **Outbreaks.**

Below this are the **Specialists** recruited for the Game and the accumulated **Research Credits**
that each acquires as the game progresses.

QBITS Pandemic Game
City names are randomly shuffled as a Virus deck the first twelve selected to create an initial **Outbreak**. The Game begins after choosing one of four Cities to be WHO Headquarters.

Until a Vaccine Release, Infections continue via **Spread** and **Outbreak R:** +1 or **Epidemic R:** +3.

STATUS Turns / Infected Cities.

City Location of Specialist

Specialist

| Flight | Vaccine | MED | RES | R: | Airlift | Virus | View | **:ACTIVITY** |

QBITS Pandemic Turns

This can appear quite complex with the decisions that may be taken. A **Specialist**/Player carries out **2 Events** and **4 Actions** that may be taken in any order. The **Event**/**Action** image is selected using the **Left** & **Right Cursor Keys** and then by pressing the **Spacebar**. The red box highlight will disappear and a **Prompt** is displayed requiring a response. **Enter** will confirm an activity and **Spacebar** will return without the activity taking place The **City** location when required will be identified by a **crosswire** with the **Popu**lation **R:** and **City Name** displayed just above the activity box.

Events: 2 (Select from:)
  Flight   Move **Specialist** to another City
  Vaccine   Deliver and clear City Infections **R:** (active only after Vaccine Release)
  MED   Relocate **MED** Centre to another City
  RES   Add **RES**earch Credit (active until Vaccine Release)

Action: 4 (Combination of :)
  R: Reduce the **R:** rate in current City if applicable.
  Airlift   Move **Specialist** +/- four cities from current location.
  Virus   Release **Vaccine** if current Specialist has required credits

   View: Use **Left** & **Right Cursor keys** to move City to City across the Map shown by crosswires, information on **Popu**lation, **R:** rate and **City Area name** are displayed.

Pressing (**h**) will display the attribute of current **Specialist** and the **City locations** of all four.

Whatever decisions are made all **Events** and **Actions** must be taken to move to the **Next Turn**.

QBITS Pandemic Activity

An activity may not be active dependant on the state of play. For example, **Vaccine** will not be available until a Cure is found. Similarly, **Cure** is active only before a Vaccine Release. The **R:** rate is only active if the current City Infection is above zero. When used with their specific activity each **Specialists** holds a special attribute.

	Flight: evt%-1 *Dispatcher*	This Offers transfer of Specialist to the next City in Virus deck. Useful to go to or get near an Infected City *Destination extended to any City 1-48*	
	Vaccine: evt%-1 *Field Medic*	Delivers to a group of Cities based around next City in Virus deck. Once delivered City R: is reduced to zero *Delivery extended to any City 1-48*	
	MED Centre**:** evt%-1 *Operations*	Relocation of MED Centre to next City in Virus deck. Upon arrival City R: is reduced to zero *Relocation extended to any City 1-48*	
	RESearch Credits**:** evt%-1 *Scientist*	Adds Credits to Specialists Total *Gains an extra Turn added to countdown*	
	R: rate act%-1 *Planner*	Reduce R: one Action per R factor *Free Turn against countdown*	
	Airlift: act%-1 *Quarantine*	Offers Transfer of Specialist to group of local cities. Once in location can use **R:** rate to reduce Infections *Upon arrival City R: is reduced to zero*	
	Cure: act%-1 *Researcher* *Doctor*	If Specialist has 5 Credits and in City with a MED Centre Vaccine is released. *As before but requires only 4 not 5 Credits* *With 5 Credits can release Vaccine from any City*	
	View Info:	Access any City Area to show Info.	

QBITS Pandemic Virus Spread

At the end of each **Specialist**/Player **Turn** and until a **Vaccine** is released the Spread of City Infections continue. The number of Cities depend on the **Global Infection Rate** at the time **2/3/4**. **R:** is raised by one if **Spread** or by three if **Epidemic** the choice being random but each time selects the next City from the Virus deck.
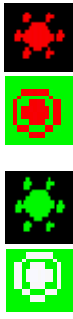

QBITS Pandemic Game End

The Game is **Lost** if more than seven **Outbreaks** occur or if the number of **Turns** runs out without managing to **Clear** all **Infected Cities**. For the **Specialist Team** to **Win** all Infected Cities have to be clear of the **Virus**.

QBITS Team League Table
A Win might place you on the League Table.

QBITS Pandemic Graphics

Drawing the characters for QBITS Pandemic and knowing I wanted them to be scalable led to thoughts about the detail and when scaling up or down what might remain recognisable.

When our eyes scan an image, the brain is analysing for pattern recognition. It is one of the reasons why changing shades of light appear to reveal previously hidden images. Looking at cloud formation or staring long enough at the weave of a carpet, your brain in trying to make sense. It will no doubt aspire to link it to a familiar shape such as a face or animal. It is therefore not difficult to create a familiar and recognisable image with only a few lines.

I use a simple grid to work out the x,y offsets from a common starting point, then add the CIRCLE/ellipse sizes and start and end of LINE positions. To position on screen, I need only a channel ID, the Window x.y graphic coordinates and a Scale.

QBITS Pandemic Specialists

A face for example needs only a round circle with two smaller circle for eyes and three short lines to represent the nose and mouth. Adding hair to a face can be achieved with ellipse shapes, one on top for very short, extending the side with a second for average length and a third lower down to resemble long hair. To help maintain the face outline I overlay with ARCs drawn in black.

The left and right sides of the torso are split to achieve the v neck. This is because the FILL command of S/SuperBASIC cannot be used with re-entrant shapes. Overlaying with black lines divide the jackets two halves, and show the sleeve and pockets.
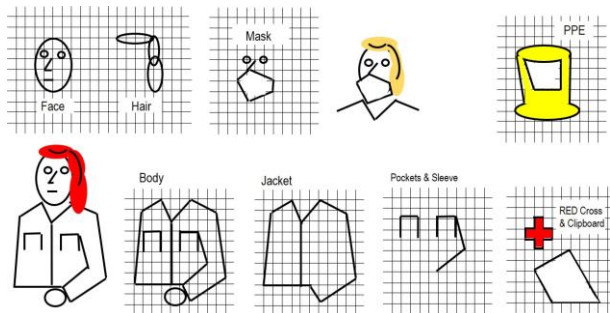
Changes in colour for jacket and hair with differing lengths can create a variety of Characters. Adding Head Gear, a Mask, Clipboard, Stethoscope and not forgetting PPE gear all help broaden the Roles they might represent.

QBITS Pandemic Events Actions
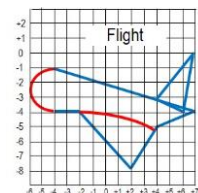
As with drawing the Specialists the graphics are a combination of **ARC**'s & **LINE**'s, some areas are FILL'd other just create a stroke to emphasize the image.

QBITS Pandemic World Map

After a few attempts constructing a World Map, it highlighted how QL S/SuperBASIC would handle the DATA created and became a tossup between using BLOCK and Pixel coordinates or a FILL'd rectangle drawn with LINE and Graphic coordinate system. The S/SuperBASIC interpreter at BBQL speed would be slow using either method however the Graphics command gave a more readily scalable option.

For starters I used a blow-up pixelized World Map to match the QL screen size. The Continents x, y coordinates and width of each rectangle shape became the DATA inputs. The height being a set constant dependant on the Scale and Window size used.
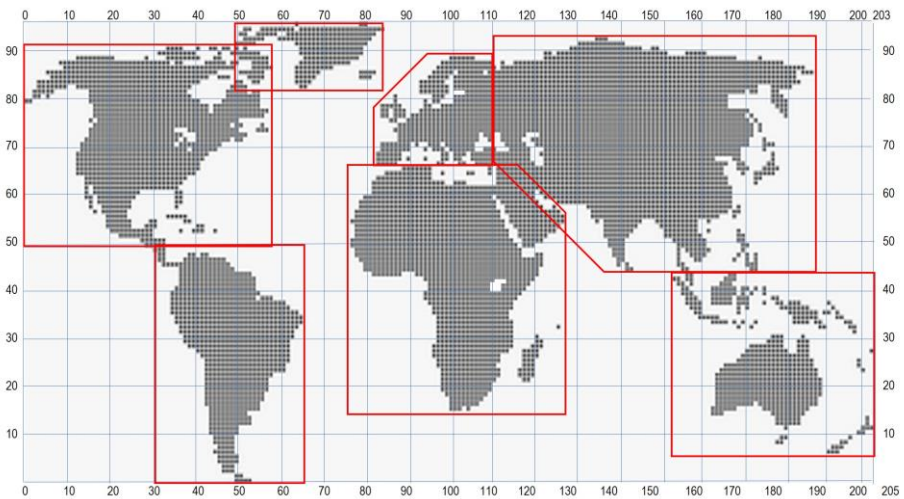
Note: Just a thought why do all Continents start with the letter A? From ancient Egyptian *Afruika* means turn to the birthplace of humanity! *America* in Mayan a possible translation is a spirit that breaths life. Classical Greek *Assuwa* (Asia) was literally an area to the east and *Australis* to the south. So Coincidence!

```
100 DEFine PROCedure Init_map
110 RESTORE 1770:READ map:Draw_map  :REMark Greenland          RESTORE reference to start of DATA lines
120 RESTORE 1695:READ map:Draw_map  :REMark America North
130 RESTORE 1760:READ map:Draw_map  :REMark Europe
140 RESTORE 1722:READ map:Draw_map  :REMark Asia
150 RESTORE 1712:READ map:Draw_map  :REMark America south
160 RESTORE 1683:READ map:Draw_map  :REMark Africa
170 RESTORE 1745:READ map:Draw_map  :REMark Australasia
180 END DEFine

200 DEFine PROCedure Draw_map
210 FOR i=1 TO map                              map number of filled rectangles
220    READ x,y,w:FILL#ch,1
230    LINE#ch,x,y TO x+w,y TO x+w,y-d TO x,y-d TO x,y:FILL#ch,0   w - width d - depth of blocks
240 END FOR i
250 END DEFine
```

QBITS Pandemic City Map

My starting point was a review of country Capitals with high population areas. In the end I selected 48 **City Areas**. As the Game is played each City is updated with information on the Viral spread and level of infection. Arrays were decided upon to hold the City Name, x,y Coordinates, size of **Popu**lation, three linked Cities referenced by map number 1 to 48 and used for **Outbrea**k purposes, and the **R:** rate or infection level.

```
300 DEFine PROCedure Init_city
310 RESTORE 1640:READ cm        :REMark cm city max : cn city number
320 DIM city$(cm,14),city(cm,8)
330 FOR i=1 TO cm                            City Example
340   READ city$(i)             :REMark Name          San Francisco
350   READ city(i,1),city(i,2)  :REMark x,y           14, 66 (Graphics Coordinates)
360   READ city(i,3)            :REMark Population     460 (4.6m)
370   READ city(i,4),city(i,5),city(i,6)  :REMark Linked Cities  2 (Los Angeles) 3 (Vancouver) 47 (Tokyo)
380        city(i,7)=0          :REMark Infection Rate
390 END FOR I
400 END DEFine


420 DEFine PROCedure Draw_city
430 FOR i=1 TO cm: City_HGL i,7,7 :PAUSE 1
440 END DEFine


460 DEFine PROCedure City_HGL(cn,c1,c2)
470 x=city(cn,1):y=city(cn,2)
480 INK#1,c1:CIRCLE#1,x,y,2:INK#1,c2:FILL#1,1:CIRCLE#1,x,y,1:FILL#1,0
490 END DEFine


1640 DATA 48                  :REMark number of City Areas
1641 DATA 'San Francisco',14,66,460,2,3,47,   'Los Angeles',16,62,1310,1,4,10
1642 DATA 'Vancouver',17,75,240,1,5,6,        'Mexico City',26,51,2440,2,7,9
1643 DATA 'Chicago',33,74,800,3,10,12,        'Atlanta',36,62,560,5,6,13
1644 DATA 'Miami',36,57,610,4,9,10,           'Lima',36,32,1000,9,11,15
1645 DATA 'Bogota',40,42,980,4,7,8,           'Washington',40,66,620,5,6,13
1646 DATA 'Santiago',44,17,660,8,14,48,       'Montreal',45,73,410,5,13,18
1647 DATA 'New York',45,69,2370,10,12,16,     'Buenos Aries',54,16,1270,11,15,28
1648 DATA 'Sao Paulo',62,23,2120,8,14,17,     'Madrid',85,68,620,13,18,20
1649 DATA 'Lagos',88,44,1600,15,20,23,        'London',88,76,1380,12,19,22
1650 DATA 'Paris',90,73,1250,18,20,21,        'Algiers',92,65,500,16,17,19
1651 DATA 'Milan',96,70,820,19,24,25,         'Stockholm',98,81,140,18,21,24
1652 DATA 'Kinshasa',98,35,1430,17,28,29,     'St Petersburg',103,81,750,21,22,26
1653 DATA 'Istanbul',105,69,1480,21,27,31,    'Moscow',106,75,1790,19,24,41
1654 DATA 'Cairo',108,57,2040,25,29,32,       'Johannesburg',107,17,800,14,23,34
1655 DATA 'Khartum',111,50,520,23,27,32,      'Baghdad',115,63,870,27,30,33
1656 DATA 'Tehran',120,65,1600,25,26,30,      'Barhrain',121,56,170,29,30,33
1657 DATA 'Karachi',132,57,2750,32,34,35,     'Mumbai',136,51,2770,28,33,36
1658 DATA 'Delhi',138,57,2660,33,37,41,       'Chennai',140,45,1330,34,37,40
1659 DATA 'Kolkata',145,56,1410,35,36,38,     'Bankok',154,50,1450,37,39,42
1660 DATA 'Ho Chi Minh',158,47,1010,38,40,42, 'Jakarta',159,35,3020,36,38,48
1661 DATA 'Beijing',162,68,2490,26,35,44,     'Hong Kong',162,55,720,39,43,46
1662 DATA 'Shanghai',163,62,3400,42,44,45,    'Seoul',167,66,2560,41,43,47
1663 DATA 'Taipia',167,56,700,43,46,47,       'Manila',168,50,2270,42,45,48
1664 DATA 'Tokyo',174,66,3780,1,44,45,        'Sydney',182,14,500,11,40,46
```

QBITS Pandemic Code

1000 REMark **QBPandemic_v01 (QBITS Pandemic 2020)**

```
1002 MODE 4:gx=0:gy=0:dy=28      :REMark For BBQL gx=0 gy=0 dy=28
1003 Drv$='win2_':lchk=0          :REMark Default Drive : Intro Check
1004 REMark The number of Turns (tnum) & RESearch Credits (cres)
1005 REMark control the duration & difficulty of completing the Game
1006 tnum=120:cres=5              :REMark [score%=num*100-od$*100]
1007 rate=2:evt%=2:act%=4         :REMark Infection Rate : Events : Actions
```

1009 **WHEN ERRor**
```
1010  IF ERR_NF OR ERR_IU OR ERR_DF OR ERR_FE OR ERR_BN
1011    CURSOR#3,48,24:PRINT#3,'Set Default Drive: ';
1012    OPEN#9,con_10x10a10x10_6:WINDOW#9,36,10,280+gx,208+gy
1013    PAPER#9,0:INK#9,7:CLS#9:INPUT#9,Drv$:CLOSE#9:LReset
1014  END IF
```
1015 **END WHEN**

1017 **Init_win:Init_Info:Init_League:Game_Menu**

1019 **DEFine PROCedure Game_Menu**
1020 **REPeat Menu_lp**
```
1021  CSIZE#3,2,0:INK#3,7:CLS#3
1022  CURSOR#3,54, 6:PRINT#3,'QBITS Pandemic':CSIZE#3,0,0
1023  CURSOR#3,32,20:PRINT#3,'(I)ntro  (N)ew  (H)ighScore  (E)xit'
1024  k=CODE(INKEY$(-1))
```
1025 **SELect ON k**
```
1026  =73,105:Intro_Pandemic:lchk=0      :REMark (I)ntro
1027  =78,110:Init_city:QBPandemic        :REMark (N)ew
1028  =72,104:CLS#3:LTable:PAUSE          :REMark (H)ighScore
1029  =69,101:EXIT Menu_lp                :REMark (E)xit
```
1030 **END SELect**
1031 **END REPeat Menu_lp**
```
1032 CLOSE#4:CLOSE#3:PAPER#2,0:INK#2,7:CLS#2:PRINT#0,'Bye...':STOP
```
1033 **END DEFine**
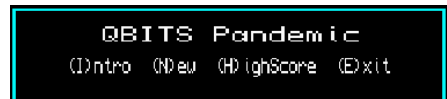
1035 **DEFine PROCedure Game_End**
```
1036 ch=3:CLS#3:CSIZE#3,2,0:INK#3,7
1037 CURSOR#3,88,6:PRINT#3,'Game End':CSIZE#3,0,0
1038 IF ctr=0
```
1039 **AVirus 4,15,10:AVirus 4,118,10:**INK#3,7
```
1040    CURSOR#3,64,20:PRINT#3,'Well DONE Humanity Saved'
```
1041   PAUSE:**LTable**:score%=num*100-od$:**HighScore**

1042 ELSE
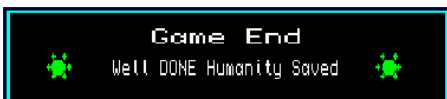
```
1043    AVirus 2,15,10:AVirus 2,118,10:INK#3,7
1044    CURSOR#3,48,20:PRINT#3,'You LOSE Virus Not Eradicated'
1045 END IF
```
1046 PAUSE:**Game_Menu**
1047 **END DEFine**
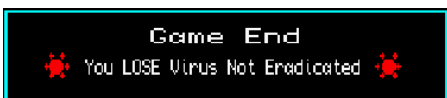
```
1049 DEFine PROCedure QBPandemic
1050 IF lchk=0:Game_screen:lchk=1
1051 Game_reset:c=1:w=1:v=1:vn=13:gir=2:s=1:Role_HGL 7,s
1052 num=tnum:evt%=2:act%=4:m%=4
1053 REPeat Game_lp
1054  ActEvent:IF num<=1 OR ob>7 OR ctr=0:Game_End

1055   IF act%=0 AND evt%=0
1056    Act_HGL 2,6:CLS#0:Role_HGL 5,s:s=s+1:IF s>4:s=1
1057    IF v=1
1058      FOR haz=1 TO rate
1059        BLOCK#3,230,10,0,12,0:vn=vn+1:num=num-1
1060        r%=RND(1 TO 8):IF r%=3 OR r%=7:Epidemic:ELSE Spread
1061      END FOR haz
1062    END IF
1063    Act_HGL 0,6:act%=4:evt%=2:m%=4:ActEvent:Role_HGL 7,s
1064   END IF

1065  en=Team(s,1):Rate_HGL en
1066  Act_HGL 2,m%:k=CODE(INKEY$(-1)):Act_HGL 0,m%

1067  SELect ON k
1068   =78,104:Help_Info Role (s)
1069   =192:m%=m%-1:IF m%<0:m%=7
1070   =200:m%=m%+1:IF m%>7:m%=0
1071   = 32:a%=m%+1:INK#4,2:Activity:a%=0:IF lchk=1:CLS#0:num=num-1:lchk=0
1072   =232:act%=0:evt%=0          :REMark F1 Next Specialist
1073   =236:num=120               :REMark F2 Reset Turns
1074   =240:Spread                :REMark F3 Check
1075   =240:Epidemic:IF gir=7:gir=2 :REMark F4 Check
1076   =244:Outbreak:IF ob=7 :ob=1 :REMark F5 Check
1077  END SELect

1078 END REPeat Game_lp
1079 END DEFine


1081 DEFine PROCedure Act_HGL(col,m%)
1082 BLOCK#3,230,12,0,12,0:x1=1+m%*14.5:x2=15+m%*14.5
1083 INK#3,col:LINE#3,x1,1 TO x1,10 TO x2,10 TO x2,1 TO x1,1
1084 END DEFine


1086 DEFine PROCedure ActEvent
1087 INK#3,2:CURSOR#3,42,1:PRINT#3,evt%:CURSOR#3,96,1:PRINT#3,act%
1088 ctr=0:FOR i=1 TO 48:IF city(i,7)>0:ctr=ctr+1
1089 stat$=FILL$(' ',3-LEN(num))&num&' '&FILL$(' ',2-LEN(ctr))&ctr
1090 STRIP#2,0:INK#2,7:CURSOR#2,454,58:PRINT#2,stat$:STRIP#2,1
1091 END DEFine


1093 DEFine PROCedure Help_Info(sh)
1094 ln$='':FOR i=1 TO 4:ln$=ln$&'('&i&')'&city$(Team(i,1))&' '
1095 ln%=LEN(ln$):INK#0,4:CURSOR#0,254-ln%/2*6,14:PRINT#0,ln$
1096 ln%=LEN(Info$(sh))  :CURSOR#0,254-ln%/2*6,2:PRINT#0,Info$(sh)
1097 END DEFine
```


Hazards

HAZARDS
v=1 Virus active
rate = Global Infection Rate

Change to Next Specialist

Key Input

EVENT ACTION
Specialist Help Info
Activity Highlight Left
Activity Highlight Right

Checks F1 – F4

Event: 2 Action: 4

120 12
STATUS

MED Centre - Relocate to any City (R:>0)
(1)Sao Paulo (2)Montreal (3)London (4)Washington

```
1099 DEFine PROCedure Activity
1100 IF a%=1 AND evt%>0                    :City_chg    :REMark Flight
1101 IF a%=2 AND evt%>0 AND v=2            :Vacc_chg    :REMark Vaccine
1102 IF a%=3 AND evt%>0                    :MED_chg     :REMark MED Centre
1103 IF a%=4 AND evt%>0 AND v=1 AND Team(s,2)<5 :RES_chg
1104 IF a%=5 AND act%>0 AND city(en,7)>0:Rate_chg  :REMark R: rate
1105 IF a%=6 AND act%>0:cn=Team(s,1)      :Move_chg    :REMark Airlift
1106 IF a%=7 AND act%>0 AND v=1           :Cure_chg    :REMark Release Cure
1107 IF a%=8                              :View_chg    :REMark Info Check
1108 IF vn>48:vn=1
1109 END DEFine
```



```
1111 DEFine PROCedure City_chg
1112 INK#3,2:CURSOR#3,4,12:PRINT#3,'Commercial Flight ¼   Rtn'
1113 BLOCK#3,2,4,118,14,2:BLOCK#3,12,3,126,16,2
1114 cn=virus(vn):cm=cn                              :REMark Role(s)=3 Dispatcher
1115 IF Role(s)=3:sm=cn-48:em=cn+48:ELSE sm=cn:em=cn
1116 City_loc:IF lchk=1:Team(s,1)=cn:City_Visit cn:vn=vn+1:evt%=evt%-1
1117 END DEFine
```



```
1119 DEFine PROCedure Vacc_chg
1120 INK#3,2:CURSOR#3,4,12:PRINT#3,'Vaccine  ¼City Drop½ ¼   Rtn'
1121 BLOCK#3,2,4,136,14,2:BLOCK#3,12,3,146,16,2
1122 cn=virus(vn):cm=cn                              :REMark Role(s)=7 Field Medic
1123 IF Role(s)=7:sm=cn-48:em=cn+48:ELSE sm=cn-RND(1 TO 8):em=cn+RND(1 TO 8)
1124 City_loc:IF lchk=1:city(cn,7)=0:City_Info cn:vn=vn+1:evt%=evt%-1
1125 END DEFine
```



```
1127 DEFine PROCedure MED_chg
1128 INK#3,2:CURSOR#3,4,12:PRINT#3,'Relocate MED Centre ¼   Rtn'
1129 BLOCK#3,2,4,130,14,2:BLOCK#3,12,3,146,16,2
1130 cn=virus(vn):cm=cn                              :REMark Role(s)=1 Operations
1131 IF Role(s)=1:sm=cn-48:em=cn+48:ELSE sm=cn:em=cn
1132 City_loc
1133 IF lchk=1
1134  MEDCtr(c)=cn:MED_HGL 5,c:city(cn,7)=0:City_Info cn
1135  vn=vn+1:evt%=evt%-1:c=c+1:IF c>4:c=1
1136 END IF
1137 END DEFine
```



```
1139 DEFine PROCedure RES_chg
1140 INK#3,2:CURSOR#3,4,12:PRINT#3,'Bank RESearch Credit ¼   Rtn'
1141 BLOCK#3,2,4,136,14,2:BLOCK#3,12,3,146,16,2:c=s
1142 REPeat RES_lp
1143  IF Team(c,2)<cres:k=CODE(INKEY$(-1)):ELSE EXIT RES_lp
1144  SELect ON k
1145  =32: EXIT RES_lp
1146  =10:Team(c,2)=Team(c,2)+1:vn=vn+1:evt%=evt%-1:lchk=1:EXIT RES_lp
1147  END SELect
1148 END REPeat RES_lp
1149 IF lchk=1 AND Role(s)=5:num=num+2               :REMark Role(s)=5 Scientist
1150 Cure_HGL 5,c
1151 END DEFine
```

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1153 **DEFine PROCedure Rate_chg**
1154 INK#3,2:CURSOR#3,4,12:PRINT#3,'Reduce R: rate ¼   Rtn'
1155 BLOCK#3,2,4,100,14,2:BLOCK#3,12,3,110,16,2
1156 **REPeat Rate_lp**
1157   **City_pos en**:k=CODE(INKEY$(-1)):**City_pos en**
1158   IF k=10 AND city(en,7)>0:city(en,7)=city(en,7)-1:act%=act%-1:lchk=1
1159   CURSOR#2,252,168:PRINT#2,city(en,7):**Rate_HGL en**
1160   IF k=32 OR city(en,7)=0 OR act%<1:**EXIT Rate_lp**
1161 **END REPeat Rate_lp**
1162 IF lchk=1 AND Role(s)=2:num=num+1   :REMark Role(s)=2 **Planner**
1163 **END DEFine**
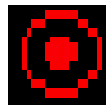
1165 **DEFine PROCedure Move_chg**
1166 INK#3,2:CURSOR#3,4,12:PRINT#3,'Airlift to ¼Next City½ ¼   Rtn'
1167 BLOCK#3,2,4,148,14,2:BLOCK#3,12,3,158,16,2
1168 cm=cn:sm=cn-act%:em=cn+act%:mact%=act%:**City_loc**
1169 IF lchk=1
1170   IF cm<Team(s,1):mact%=Team(s,1)-cm   :REMark < used act% count
1171   IF cm>Team(s,1):mact%=cm-Team(s,1)   :REMark > used act% count
1172   IF cn=Team(s,1):RETurn
1173   IF Role(s)=8:city(cn,7)=0:**City_Info cn**   :REMark Role(s)=8 **Quarantine**
1174   Team(s,1)=cn:**City_Visit** cn:act%=act%-mact%
1175 END IF
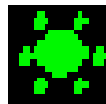1176 **END DEFine**

1178 **DEFine PROCedure Cure_chg**
1179 IF v=2:RETurn
1180 IF Role(s)=cres-1:Team(s,2)=cres   :REMark Role(s)=4 **Researcher**
1181 tchk=0:FOR i=1 TO 5:IF Team(s,1)=MEDCtr(i):tchk=1::EXIT i
1182 IF tchk=0 AND Role(s)<>6:RETurn   :REMark Role(s)=6 **Doctor**
1183 IF Team(s,2)<5
1184   INK#3,2:col=2:CURSOR#3,4,12:PRINT#3,'No Vaccine Available   Rtn'
1185 ELSE
1186   INK#3,4:col=4:CURSOR#3,4,12:PRINT#3,' Vaccine Released   Rtn'
1187   v=2:ch=3:AVirus 4,95,5
1188 END IF
1189 BLOCK#3,12,3,128,16,col:PAUSE
1190 **END DEFine**

1192 **DEFine PROCedure View_chg**
1193 INK#3,2:CURSOR#3,4,12:PRINT#3,'View ¼City Area Info½   Rtn'
1194 BLOCK#3,12,3,138,16,2:cm=cn:sm=cn-48:em=cn+48:**City_loc**
1195 **END DEFine**

Flight	Vaccine	MED	RES	R:	Airlift	Virus	View

```
1197 DEFine PROCedure City_loc
1198 REMark cn city number: cm transitional: sm start - em end city
1199 REPeat Move_lp
1200   IF cm< 1:cn=48+cm      :REMark cm<1 [48+ -cm : 48/47/46 etc]
1201   IF cm>48:cn=cm-48      :REMark cm>48 [cm -48 : 1/ 2/ 3 etc]
1202   City_pos cn:k=CODE(INKEY$(-1)):City_pos cn
1203   SELect ON k
1204     =192:cm=cm -1:IF cm<sm:cm=sm:ELSE cn=cm
1205     =200:cm=cm+1:IF cm>em:cm=em:ELSE cn=cm
1206     =32:lchk=0:EXIT Move_lp
1207     =10:lchk=1:EXIT Move_lp
1208   END SELect
1209 END REPeat Move_lp
1210 END DEFine
```
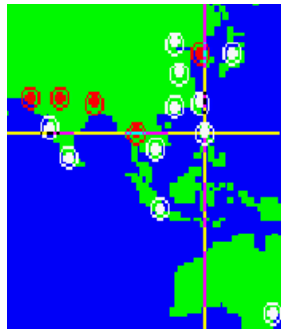


```
1212 DEFine PROCedure City_pos(n)
1213 mx=city(n,1):my=city(n,2)
1214 INK#1,7:OVER#1,-1:LINE#1,mx,10 TO mx,86:LINE#1,10,my TO
184,my:OVER#1,0
1215 INK#2,7:City_Info n
1216 END DEFine
```

Crosswires


```
1218 DEFine PROCedure Spread
1219 BLOCK#3,230,10,0,12,0:en=virus(vn):Infect en,1
1220 INK#3,2:CURSOR#3,2,12:PRINT#3,'Virus Increase ';city$(en):PAUSE 80
1221 END DEFine
```

```
1223 DEFine PROCedure Infect(ci,r)
1224 city(ci,7)=city(ci,7)+r:City_Info ci:City_Update ci:PAUSE 20
1225 IF city(ci,7)>3 : city(ci,7)=3:City_Info ci : Outbreak ci
1226 END DEFine
```

```
1228 DEFine PROCedure Outbreak(ci)
1229 BLOCK#3,230,10,0,12,0:ob=ob+1:IF ob>7:Game_End
1230 INK#3,2:CURSOR#3,2,12:PRINT#3,'Outbreak in Surrounding Areas'
1231 BLOCK#2,6,90,4,50,1:INK#2,7
1232 FOR i=1 TO 9:CURSOR#2,4,50+i*9:PRINT#2,ob$(i):PAUSE 3
1233 OVER#2,1:CURSOR#2,12,101-ob*7,-3,-4:PRINT#2,ob:OVER#2,0
1234 PAUSE 50:BLOCK#3,230,12,0,12,0
1235 n1=city(cn,4):IF city(n1,7)<3:Infect n1,1
1236 n2=city(cn,5):IF city(n2,7)<3:Infect n2,1
1237 n3=city(cn,6):IF city(n3,7)<3:Infect n3,1
1238 END DEFine
```



```
1240 DEFine PROCedure Epidemic
1241 BLOCK#3,230,10,0,12,0:en=virus(vn):Infect en,3
1242 INK#3,2:CURSOR#3,2,12:PRINT#3,'Epidemic in ';city$(en);' '
1243 rate=4:IF gir<6:rate=3:IF gir<4:rate=2
1244 City_Shuffle:gir=gir+1:IF gir>7:gir=7
1245 STRIP#2,0:INK#2,7:CURSOR#2,210,64,-3,-4:PRINT#2,rate:STRIP#2,1
1246 PAUSE 80
1247 END DEFine
```



```
1249 DEFine PROCedure City_Shuffle
1250 DIM virus(48):FOR i=1 TO 48:virus(i)=i
1251 FOR c=48 TO 3 STEP -1
1252   ran=RND(1 TO c-1):temp=virus(c):virus(c)=virus(ran):virus(ran)=temp
1253 END FOR c
1254 END DEFine
```

1256 **DEFine PROCedure City_Info(n)**
1257 INK#2,7:p$=city(n,3):pl=LEN(p$)
1258 CURSOR#2,198,168:PRINT#2,p$(1 TO pl-2);'.';p$(pl-1);'m '
1259 CURSOR#2,252,168:PRINT#2,city(n,7):**Rate_HGL n**
1260 CURSOR#2,302,168:PRINT#2,city$(n)&FILL$(' ',14-LEN(city$(n)))
1261 **END DEFine**

1263 **DEFine PROCedure City_Update(ca)**
1264 **City_HGL ca,7,7**:PAUSE 5:**City_HGL ca,7,2**:PAUSE 5:**City_HGL ca,2,2**
1265 INK#2,7:r=2:ac$='':od$='':IF ac>99900:**Game_End**
1266 ac=ac+city(ca,3):od=ac:Str$=ac*2:sl=LEN(Str$)
1267 IF sl<4:ac$='.'&Str$(1 TO sl-2):ELSE ac$=Str$(1 TO sl-3)&'.'&Str$(sl-2)
1268 CURSOR#2,460,16:PRINT#2,FILL$(' ',5-LEN(ac$));ac$;'m'
1269 od=ac-RND(500 TO 999):Str$=od:sl=LEN(Str$)
1270 IF sl<4:od$='.0'&Str$(1):ELSE od$=Str$(1 TO sl-4)&'.'&Str$(sl-3 TO sl-2)
1271 CURSOR#2,400,16:PRINT#2,FILL$(' ',5-LEN(od$));od$;'m'
1272 **END DEFine**

1274 **DEFine PROCedure City_Visit**
1275 c$=city$(Team(s,1)):INK#3,5:CURSOR#3,160,0:PRINT#3,FILL$(' ',14-LEN(c$))&c$
1276 **END DEFine**

1278 **DEFine PROCedure City_HGL(cn,c1,c2)**
1279 x=city(cn,1):y=city(cn,2)
1280 INK#1,c1:CIRCLE#1,x,y,2:INK#1,c2:FILL#1,1:CIRCLE#1,x,y,1:FILL#1,0
1281 **END DEFine**

1283 **DEFine PROCedure Role_HGL(col,s)**
1284 BLOCK#3,36,40,240,0,0:INK#2,col
1285 CURSOR#2,400,174+s*10:PRINT#2,Team$(Role(s)):**Cure_HGL 5,s**
1286 **Specialist 3,126,17,Role(s):City_Visit**
1287 **END DEFine**

1289 **DEFine PROCedure MED_HGL(col,w)**
1290 BLOCK#2,8,40,4,184,1:INK#2,col:w$=city$(MEDCtr(w))
1291 CURSOR#2,6,174+w*10:PRINT#2,'> ';FILL$(' ',14-LEN(w$));w$
1292 **END DEFine**

1294 **DEFine PROCedure Rate_HGL(cn)**
1295 IF city(cn,7)=0:**City_HGL cn**,7,7:INK#3,7:ELSE INK#3,2
1296 CIRCLE#3,66,6,3:FILL#3,1:CIRCLE#3,66,6,1:FILL#3,0
1297 **END DEFine**

1299 **DEFine PROCedure Cure_HGL(col,c)**
1300 BLOCK#2,12,40,492,184,1:INK#2,col
1301 CURSOR#2,480,174+c*10:PRINT#2,Team(c,2);' <'
1302 **END DEFine**

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1304 REMark **QBPandemic Graphics**

1306 **DEFine PROCedure Specialist(ch,x,y,d%)**
1307 **SELect ON d%**
1308 =1:**Face 0,1,x,y:Hair 2,1,x,y:Body   2,0,x,y:Hood 2,x,y:Clip 7,x,y**   Operations
1309 =2:**Face 0,1,x,y:Hair 16,1,x,y:Body   4,1,x,y**   Planner
1310 =3:**Face 7,0,x,y:Hair 2,2,x,y:Body   5,1,x,y:Clip 7,x,y**   Dispatcher
1311 =4:**Face 0,1,x,y:Hair 6,2,x,y:Body   3,1,x,y**   Researcher
1312 =5:**Face 0,1,x,y:Hair 5,2,x,y:Body 248,2,x,y:Mask   x,y**   Scientist
1313 =6:**Face 0,1,x,y:Hair 6,1,x,y:Body   7,1,x,y:Scope x,y**   Doctor
1314 =7:**Face 7,0,x,y:Hair 2,1,x,y:Body 32,2,x,y:Hood 32,x,y:Cross x-2,y+4**   Field Medic
1315 =8:**Body 6,0,x,y:PPE 6,x,y**   Quarantine
1316 **END SELect**
1317 **END DEFine**

1319 **DEFine PROCedure Face (col,fil,x,y)**
1320 INK#ch,7:FILL#ch,fil:CIRCLE#ch,x,y,-6,4,.8,PI:FILL#ch,0   :REMark Face
1321 INK#ch,col:CIRCLE#ch,x-2.5,y+.5,.5:CIRCLE#ch,x+.5,y+.3,.5   :REMark Eyes
1322 LINE#ch,x-1,y+.4 TO x-2,y-1.2 TO x-.4,y-1.3   :REMark Nose
1323 LINE#ch,x-1.5,y-2.6 TO x+.5,y-2.6   :REMark Mouth
1324 **END DEFine**

1326 **DEFine PROCedure Hair(col,lgth,x,y)**
1327 INK#ch,col:FILL#ch,1:CIRCLE#ch,x,y+3,4,.4,PI/2:FILL#ch,0   :REMark Top
1328 IF lgth>0 :FILL#ch,1:CIRCLE#ch,x+3.5,y+1,2,.4,PI:FILL#ch,0   :REMark Back
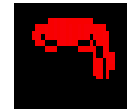1329 IF lgth>1 :FILL#ch,1:CIRCLE#ch,x+3.5,y-2,3,.4,PI:FILL#ch,0   :REMark Long
1330 INK#ch,0 :ARC#ch,x-3,y+3 TO x+2,y+3,PI/2:ARC#ch,x+2,y+3 TO x+3,y-2,200
1331 **END DEFine**

1333 **DEFine PROCedure Body(col,pkt,x,y)**
1334 INK#ch,col:FILL#ch,1   :REMark Left side
1335 LINE#ch,x-1,y-8 TO x-2,y-14 TO x-6,y-7 TO x-5,y-7 TO x-2,y-5 TO x-1,y-8
1336 FILL#ch,0:FILL#ch,1   :REMark Right side
1337 LINE#ch,x-1,y-8 TO x-1,y-14 TO x+1,y-16 TO x+7,y-14 TO x+6,y-7
1338 LINE#ch TO x+2,y-5 TO x,y-8:FILL#ch,0
1339 INK#ch,0:LINE#ch,x-1,y-15 TO x+4,y-12 TO x+3.5,y-9   :REMark Sleeve
1340 INK#ch,0:LINE#ch,x-.5,y-8 TO x-1.5,y-14   :REMark Mid Divide
1341 IF pkt>0:INK#ch,0:LINE#ch,x+2,y-11 TO x+2,y-9 TO x,y-11 TO x,y-11
1342 IF pkt>1:INK#ch,0:LINE#ch,x-4,y-11 TO x-4,y-9 TO x-2,y-9 TO x-2,y-11
1343 INK#ch,7:FILL#ch,1:CIRCLE#ch,x-.7,y-15,1.6:FILL#ch,0   :REMark Hand
1344 INK#ch,0:CIRCLE#ch,x-.7,y-15,1.6
1345 **END DEFine**

1347 **DEFine PROCedure Hood(col,x,y)**
1348 INK#ch,col:FILL#ch,1:CIRCLE#ch,x-1.6,y+4,3.6,.8,-PI/5:FILL#ch,0
1349 FILL#ch,1:CIRCLE#ch,x+.5,y+4,4,.8,-PI/2:FILL#ch,0:INK#ch,0
1350 ARC#ch,x-4,y+3 TO x+2,y+3,PI/3:FILL#ch,1:CIRCLE#ch,x-2,y+3.4,1:FILL#ch,0
1351 **END DEFine**

1353 **DEFine PROCedure PPE(col,x,y)**
1354 INK#ch,col:FILL#ch,1:CIRCLE#ch,x-.5,y+3,4,.4,PI/1.8:FILL#ch,0
1355 FILL#ch,1:CIRCLE#ch,x+.5,y-5.5,5,.3,PI/2:FILL#ch,0
1356 INK#ch,0:CIRCLE#ch,x,y-6,5,.3,PI/2   :FILL#ch,1:INK#ch,col
1357 LINE#ch,x-5,y+3 TO x+4,y+3 TO x+4,y-5 TO x-3,y-5 TO x-5,y+3:FILL#ch,0
1358 FILL#ch,1:INK#ch,7
1359 LINE#ch,x-3.5,y+2 TO x+2,y+2 TO x+2,y-3 TO x-2,y-3 TO x-3.5,y+2
1360 FILL#ch,0:INK#ch,0:ARC#ch,x-3.5,y+2 TO x+2,y+2,PI/5
1361 LINE#ch,x+2,y+2 TO x+2,y-3.5 TO x-2,y-3.5 TO x-3.5,y+2
1362 FILL#ch,1:INK#ch,2:CIRCLE#ch,x-.7,y-15,1.4:FILL#ch,0:FILL#ch,1
1363 LINE#ch,x,y-14 TO x+3,y-13 TO x+4,y-15 TO x+1,y-16 TO x+.5,y-14:FILL#ch,0
1364 **END DEFine**
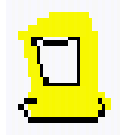
1366 **DEFine PROCedure Mask(x,y)**
1367 FILL#ch,1:INK#ch,7
1368 LINE#ch,x-2,y TO x-4,y-1 TO x-2,y-5 TO x,y-5 TO x+3,y-2 TO x-2,y
1369 FILL#ch,0:INK#ch,0
1370 LINE#ch,x-2,y TO x-4,y-1 TO x-2,y-5 TO x,y-5 TO x+3,y-2 TO x-2,y
1371 **END DEFine**

1373 **DEFine PROCedure Scope(x,y)**
1374 INK#ch,2:ARC#ch,x-4,y-2 TO x+3,y,PI:FILL#ch,1:CIRCLE#ch,x+3,y-1,.6
1375 LINE#ch,x-.5,y-4 TO x-2,y-14:CIRCLE#ch,x-2,y-14,1.2,.5,PI:FILL#ch,0
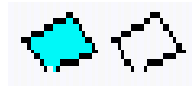1376 **END DEFine**

1378 **DEFine PROCedure Clip(col,x,y)**
1379 INK#ch,col:FILL#ch,1
1380 LINE#ch,x-1,y-15 TO x-4,y-12 TO x+1,y-9 TO x+4,y-13 TO x-1,y-15:FILL#ch,0
1381 INK#ch,0 :LINE#ch,x-2,y-15 TO x-4,y-12 TO x+1,y-9 TO x+4,y-13 TO x-1,y-15
1382 **END DEFine**

1384 **DEFine PROCedure Cross(x,y)**
1385 FILL#ch,1:INK#ch,7:CIRCLE#ch,x,y,2.2:FILL#ch,0:FILL#ch,1:INK#ch,2
1386 LINE#ch,x-1.6,y+.4 TO x+1.6,y+.4 TO x+1.6,y-.4 TO x-1.6,y-.4 TO x-1.6,y+.4
1387 LINE#ch,x-.4,y+1.5 TO x+.4,y+1.5 TO x+.4,y-1.5 TO x-.4,y-1.5 TO x-.4,y+1.5
1388 FILL#ch,0:INK#ch,5
1389 **END DEFine**

1391 **DEFine PROCedure Skull(x,y)**
1392 INK#ch,7:LINE#ch,x-4,y-3 TO x+4,y-6:LINE#ch,x-4,y-6 TO x+4,y-3
1393 LINE#ch,x-.4,y-3 TO x-.8,y-3:LINE#ch,x-1.2,y-2.5 TO x+1.6,y-2.5
1394 FILL#ch,1:LINE#ch,x-3,y+1 TO x-2,y-1.5 TO x+2,y-1.5 TO x+3,y+1
1395 ARC#ch, x+3,y+1 TO x-3,y+1,PI:FILL#ch,0:INK#ch,0
1396 FILL#ch,1:LINE#ch,x,y TO x-.8,y-1.5 TO x+.8,y-1.5 TO x,y:FILL#ch,0
1397 FILL#ch,1:CIRCLE#ch,x-1.5,y+.5,.9:FILL#ch, 0
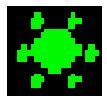1398 FILL#ch,1:CIRCLE#ch,x+1.7,y+.5,.9:FILL#ch,0:INK#2,5
1399 **END DEFine**
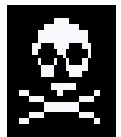
1401 **DEFine PROCedure AVirus(col,x,y)**
1402 LOCal a,b,r,c:RESTORE 1404:INK#ch,col
1403 FOR i=1 TO 7:READ a,b,r:FILL#ch,1:CIRCLE#ch,x+a,y+b,r:FILL#ch,0
1404 DATA 0,0,2,-1.8,3.2,.6,1.8,3.2,.6,-3.2, 0,.6
1405 DATA 3.2,0,.6,-1.8,-2.8,.6,1.8,-2.8,.6
1406 **END DEFine**

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```
1408 DEFine PROCedure MEDCamp(x,y)
1409 INK#ch,7:FILL#ch,1:LINE#ch,x-3,y TO x+2,y+3 TO x+5,y+1
1410 LINE#ch TO x+5,y-3.8 TO x+3,y-5 TO x-3,y-5 TO x-3,y:FILL#ch,0
1411 INK#ch,0:LINE#ch,x+3,y-5 TO x+3,y TO x,y+2
1412 LINE#ch,x+3,y TO x+5,y+1.2:Cross x,y-2
1413 END DEFine
```



```
1415 DEFine PROCedure Vaccine(x,y)
1416 INK#ch,7
1417 LINE#ch,x-4,y+1.2 TO x+2,y+1.2 TO x+3,y+.6 TO x+3,y-.6 TO x+2,y-1.2
1418 LINE#ch TO x-4,y-1.2 TO x-4,y+1.2:LINE#ch,x+3,y TO x+6.6,y
1419 LINE#ch,x-6,y TO x-4,y:LINE#ch,x-6,y+2 TO x-6,y-2
1420 FILL#ch,1:INK#ch,4
1421 LINE#ch,x-3,y+.6 TO x+1.8,y+.6 TO x+1.8,y-.6 TO x-3,y-.6 TO x-3,y+.6
1422 FILL#ch,0:INK#ch,7
1423 END DEFine
```



```
1425 DEFine PROCedure Copter(x,y)
1426 INK#ch,7:LINE#ch,x-5,y TO x+6,y:LINE#ch,x,y-1 TO x-5,y-5
1427 FILL#ch,1:LINE#ch,x,y TO x+6,y-4 TO x+4,y-4:ARC#ch TO x,y-6,-PI/4
1428 LINE#ch TO  x-4,y-6:ARC#ch TO x-5,y-5,-PI:LINE#ch TO x-2,y-4 TO x,y
1429 FILL#ch,0:CIRCLE#ch,x+6.5,y-4,1:POINT#ch,x+6.5,y-4
1430 Cross x+1,y-4
1431 END DEFine
```



```
1433 DEFine PROCedure Flight(x,y)
1434 INK#ch,7
1435 FILL#ch,1:ARC#ch,x-4,y-4 TO x-4,y-1,-PI:LINE#ch TO x+7,y-4 TO x+4,y-5
1436 LINE#ch TO x+2,y-8 TO x-2,y-4 TO x-4,y-4: FILL#ch,0
1437 FILL#ch,1:LINE#ch,x+4,y-4 TO x+7,y TO x+6,y-5 TO x+4,y-4:FILL#ch,0
1438 INK#ch,0:ARC#ch,x-2,y-4 TO x+4,y-5,-PI/4
1439 END DEFine
```



```
1441 DEFine PROCedure ViewInfo(x,y)
1442 INK#3,7:CIRCLE#3,x,y,5,.6,PI/2
1443 CIRCLE#3,x,y,3:FILL#3,1:CIRCLE#3,x,y,.8:FILL#3,0
1444 END DEFine
```



```
1446 DEFine PROCedure RESearch(x,y)
1447 INK#ch,7:ARC#ch,x+2,y TO x+5,y+4,PI:LINE#ch,x,y+1 TO x+4,y+1:FILL#ch,1
1448 LINE#ch,x+2.5,y+2.5 TO x+6,y+5 TO x+5.5,y+5.5 TO x+2,y+3 TO x+2.5,y+2.5
1449 FILL#ch,0:LINE#ch,x+2,y-2.5 TO x+6,y-2.5 TO x+5,y-1 TO x+3,y-1 TO x+2,y-2.5
1450 END DEFine
```



```
1452 DEFine PROCedure WHO_Symbol(x,y)
1453 INK#ch,248:FILL#ch,1 :CIRCLE#ch,x,y,8,.6,PI/2:FILL#ch,0
1454 INK#ch,7:FILL#ch,0  :CIRCLE#ch,x,y,8,.6,PI/2:FILL#ch,0
1455 INK#ch,0:FILL#ch,1  :CIRCLE#ch,x,y,5     :FILL#ch,0
1456 INK#ch,7:FOR i=1 TO 3:CIRCLE#ch,x,y,5-i*1.5
1457 LINE#ch,x-4.5,y TO x+4.5,y:LINE#ch,x-3.5,y+3.5 TO x+3.5,y-3.5
1458 LINE#ch,x+3.5,y+3.5 TO x-3.5,y-3.5
1459 INK#ch,7:FILL#ch,1:CIRCLE#ch,x,y,5,.1,PI:CIRCLE#ch,x,y+4,.8:FILL#ch,0
1460 END DEFine
```

1462 REMark **Maps**

1464 **DEFine PROCedure Init_city**
1465 RESTORE 1480:READ cm   :REMark cm city max: c city number
1466 DIM city$(cm,14),city(cm,7)
1467 FOR i=1 TO cm
1468 READ city$(i)   :REMark Name
1469 READ city(i,1),city(i,2)   :REMark Grid x,y
1470 READ city(i,3)   :REMark Population
1471 READ city(i,4),city(i,5),city(i,6) :REMark Connected Cities
1472   city(i,7)=0   :REMark Infection Rate
1473 END FOR i
1474 **END DEFine**

1476 **DEFine PROCedure Draw_city**
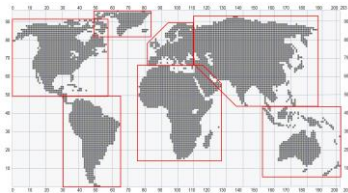1477 FOR i=1 TO cm:**City_HGL i,7,7**
1478 **END DEFine**

1480 DATA 48   :REMark **City Info**
1481 DATA 'San Francisco',14,66,460,2,3,47,   'Los Angeles',16,62,1310,1,4,10
1482 DATA 'Vancouver',17,75,240,1,5,6,   'Mexico City',26,51,2440,2,7,9
1483 DATA 'Chicago',33,74,800,3,10,12,   'Atlanta',36,62,560,5,6,13
1484 DATA 'Miami',36,57,610,4,9,10,   'Lima',36,32,1000,9,11,15
1485 DATA 'Bogota',40,42,980,4,7,8,   'Washington',40,66,620,5,6,13
1486 DATA 'Santiago',44,17,660,8,14,48,   'Montreal',45,73,410,5,13,18
1487 DATA 'New York',45,69,2370,10,12,16,   'Buenos Aries',54,16,1270,11,15,28
1488 DATA 'Sao Paulo',62,23,2120,8,14,17,   'Madrid',85,68,620,13,18,20
1489 DATA 'Lagos',88,44,1600,15,20,23,   'London',88,76,1380,12,19,22
1490 DATA 'Paris',90,73,1250,18,20,21,   'Algiers',92,65,500,16,17,19
1491 DATA 'Milan',96,70,820,19,24,25,   'Stockholm',98,81,140,18,21,24
1492 DATA 'Kinshasa',98,35,1430,17,28,29,   'St Petersburg',103,81,750,21,22,26
1493 DATA 'Istanbul',105,69,1480,21,27,31,   'Moscow',106,75,1790,19,24,41
1494 DATA 'Cairo',108,57,2040,25,29,32,   'Johannesburg',107,17,800,14,23,34
1495 DATA 'Khartum',111,50,520,23,27,32,   'Baghdad',115,63,870,27,30,33
1496 DATA 'Tehran',120,65,1600,25,26,30,   'Barhrain',121,56,170,29,30,33
1497 DATA 'Karachi',132,57,2750,32,34,35,   'Mumbai',136,51,2770,28,33,36
1498 DATA 'Delhi',138,57,2660,33,37,41,   'Chennai',140,45,1330,34,37,40
1499 DATA 'Kolkata',145,56,1410,35,36,38,   'Bankok',154,50,1450,37,39,42
1500 DATA 'Ho Chi Minh',158,47,1010,38,40,42, 'Jakarta',159,35,3020,36,38,48
1501 DATA 'Beijing',162,68,2490,26,35,44,   'Hong Kong',162,55,720,39,43,46
1502 DATA 'Shanghai',163,62,3400,42,44,45,   'Seoul',167,66,2560,41,43,47
1503 DATA 'Taipia',167,56,700,43,46,47,   'Manila',168,50,2270,42,45,48
1504 DATA 'Tokyo',174,66,3780,1,44,45,   'Sydney',182,14,500,11,40,46

```
1506 DEFine PROCedure Init_map
1507 RESTORE 1610:READ map:Draw_map :REMark Greenland
1508 RESTORE 1535:READ map:Draw_map :REMark America North
1509 RESTORE 1600:READ map:Draw_map :REMark Europe
1510 RESTORE 1562:READ map:Draw_map :REMark Asia
1511 RESTORE 1552:READ map:Draw_map :REMark America south
1512 RESTORE 1523:READ map:Draw_map :REMark Africa
1513 RESTORE 1585:READ map:Draw_map :REMark Australasia
1514 END DEFine

1516 DEFine PROCedure Draw_map
1517 FOR i=1 TO map
1518  READ x,y,n:FILL#1,1
1519  LINE#1,x,y TO x+n,y TO x+n,y-h TO x,y-h TO x,y:FILL#1,0
1520 END FOR i
1521 END DEFine
```



```
1523 DATA 68                 :REMark Africa
1524 DATA 89,65,7,  85,64,11, 104,64,1, 109,64,1, 83,63,14, 82,62,17, 102,62,3
1525 DATA 82,61,24, 82,60,26, 103,60,7, 80,59,30, 79,58,32, 79,57,32, 78,56,34
1526 DATA 78,55,34, 77,54,36, 78,53,35, 78,52,36, 78,51,36, 77,50,38, 77,49,39
1527 DATA 78,48,39, 78,47,39, 120,47,2, 79,46,43, 80,45,42, 80,44,42, 82,43,7
1528 DATA 92,43,29, 94,42,27, 95,41,24, 95,40,23, 94,39,23, 94,38,21, 95,37,20
1529 DATA 96,36,19, 96,35,18, 97,34,17, 97,33,18, 97,32,18, 97,31,18, 97,30,18
1530 DATA 125,32,1, 97,29,18, 120,29,2, 96,28,19, 119,28,3, 96,27,18, 117,27,4
1531 DATA 96,26,16, 117,26,4, 97,25,15, 117,25,3, 97,24,14, 117,24,3, 98,23,14
1532 DATA 116,23,4, 98,22,14, 116,22,4, 98,21,13, 117,21,2, 98,20,12, 98,19,12
1533 DATA 99,18,11, 100,17,8, 100,16,7, 100,15,3, 104,15,1
```



```
1535 DATA 102                    :REMark America North
1536 DATA 34,90,4, 41,90,1, 44,90,2, 47,90,2, 50,90,1, 52,90,1, 32,89,9
1537 DATA 46,89,1, 49,89,7, 13,88,9, 29,88,1, 34,88,8, 45,88,2, 51,88,7
1538 DATA 9,87,26, 36,87,2, 43,87,5, 49,87,2, 54,87,4, 10,86,40, 54,86,5
1539 DATA 6,85,40, 51,85,6, 7,84,37, 46,84,2, 53,84,4, 4,83,38, 50,83,2
1540 DATA 54,83,2, 4,82,7, 13,82,27, 49,82,3, 3,81,5, 16,81,23, 48,81,5
1541 DATA 55,81,1, 3,80,2, 6,80,1, 16,80,24, 48,80,8, 1,79,2, 16,79,26
1542 DATA 47,79,10, 17,78,27, 46,78,10, 17,77,27, 46,77,10, 17,76,38, 16,75,1
1543 DATA 18,75,32, 17,74,31, 50,74,2, 56,74,1, 16,73,20, 39,73,11, 55,73,3
1544 DATA 16,72,22, 41,72,12, 15,71,22, 38,71,1, 41,71,7, 50,71,2, 14,70,22
1545 DATA 37,70,10, 14,69,25, 40,69,6, 13,68,31, 13,67,30, 13,66,28, 13,65,28
1546 DATA 13,64,27, 15,63,24, 15,62,23, 15,61,1, 17,61,20, 15,60,1, 17,60,11
1547 DATA 36,60,2, 15,59,2, 18,59,9, 36,59,2, 16,58,1, 18,58,8, 36,58,2
1548 DATA 16,57,1, 19,57,7, 36,57,1, 17,56,1, 19,56,6, 20,55,5, 34,55,5
1549 DATA 20,54,6, 30,54,2, 38,54,2, 20,53,6, 29,53,3, 41,53,2, 21,52,10
1550 DATA 37,52,1, 40,52,3, 45,52,1, 23,51,8
```



```
1552 DATA 55                    :REMark America South
1553 DATA 28,50,6, 29,49,5, 31,48,3, 32,47,2, 39,47,2, 42,47,2, 33,46,2
1554 DATA 35,46,1, 38,46,10, 36,45,14, 37,44,13, 37,43,17, 37,42,18
1555 DATA 37,41,18, 36,40,19, 35,39,21, 35,38,20, 56,38,3, 35,37,27, 35,36,28
1556 DATA 35,35,30, 36,34,30, 36,33,30, 37,32,28, 37,31,27, 38,30,26, 38,29,25
1557 DATA 39,28,24, 41,27,22, 42,26,21, 43,25,20, 43,24,19, 43,23,19, 43,22,16
1558 DATA 43,21,15, 43,20,15, 43,19,15, 43,18,14, 43,17,14, 43,16,13, 44,15,12
1559 DATA 44,14,9, 44,13,9, 44,12,7, 44,11,7, 44,10,5, 45,9,5, 46,8,4, 45,7,5
1560 DATA 46,6,5, 46,5,5, 53,4,1, 47,4,3, 47,3,3, 49,2,2, 50,1,4
```

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1562 DATA 145   :REMark **Asia**
1563 DATA 134,92,3, 130,91,11, 128,90,17, 146,90,2, 122,89,2, 125,89,26, 155,89,5
1564 DATA 100,88,7, 122,88,45, 172,88,1, 106,87,4, 112,87,1, 115,87,63, 106,86,5
1565 DATA 112,86,71, 106,85,2, 109,85,72, 182,85,3, 106,84,75, 106,83,76, 106,82,66
1566 DATA 175,82,5, 106,81,63, 175,81,2, 175,81,2, 106,80,62, 175,80,3, 106,79,61
1567 DATA 175,79,4, 106,78,61, 176,78,3, 106,77,64, 177,77,2, 106,76,63, 170,76,1
1568 DATA 178,76,1, 106,75,64, 171,75,1, 106,74,65, 172,74,1, 106,73,65, 172,73,1
1569 DATA 106,72,1, 108,72,2, 112,72,6, 120,72,51, 106,71,1, 109,71,1, 111,71,6
1570 DATA 121,71,49, 173,71,1, 113,70,5, 121,70,49, 173,70,3, 108,69,2, 114,69,5
1571 DATA 122,69,46, 173,69,1, 106,68,13, 121,68,47, 175,68,1, 106,67,13, 122,67,40
1572 DATA 166,67,2, 174,67,1, 107,66,14, 122,66,43, 167,66,2, 174,66,2, 112,65,53
1573 DATA 167,65,3, 173,65,3, 112,64,53, 168,64,1, 171,64,4, 111,63,54, 171,63,2
1574 DATA 111,62,54, 171,62,1, 111,61,55, 111,60,9, 121,60,45, 111,59,9, 122,59,44
1575 DATA 112,58,9, 125,58,41, 113,57,9, 124,57,1, 132,57,34, 167,57,1, 113,56,13
1576 DATA 133,56,32, 166,56,2, 114,55,12, 133,55,30, 166,55,1, 114,54,13, 134,54,1
1577 DATA 136,54,9, 148,54,10, 115,53,11, 136,53,8, 149,53,9, 116,52,9, 136,52,7
1578 DATA 150,52,8, 160,52,1, 167,52,1, 116,51,7, 136,51,6, 150,51,9, 167,51,2
1579 DATA 117,50,5, 137,50,4, 152,50,8, 167,50,2, 117,49,3, 137,49,4, 153,49,7
1580 DATA 168,49,2, 138,48,3, 153,48,1, 155,48,6, 168,48,1, 138,47,3, 153,47,1
1581 DATA 155,47,4, 167,47,1, 169,47,1, 139,46,2, 153,46,1, 157,46,2, 166,46,1
1582 DATA 169,46,1, 171,46,1, 139,45,1, 141,45,1, 153,45,1, 169,45,3, 141,44,2
1583 DATA 154,44,2, 170,44,2, 155,43,2, 155,42,2, 156,41,1

1585 DATA 91   :REMark **Australasia**
1586 DATA 165,43,2, 152,42,2, 164,42,3, 153,41,2, 163,41,3, 154,40,2, 161,40,6
1587 DATA 168,40,2, 171,40,1, 173,40,1, 154,39,3, 161,39,6, 168,39,1, 170,39,1
1588 DATA 173,39,1,155,38,3, 161,38,5, 167,38,3, 175,38,2, 155,37,4, 162,37,4
1589 DATA 167,37,3, 173,37,1, 176,37,2, 180,37,3, 189,37,1, 156,36,3, 167,36,1
1590 DATA 169,36,1, 177,36,7, 190,36,1, 157,35,2, 167,35,1, 179,35,7, 187,35,2
1591 DATA 191,35,1, 158,34,5, 180,34,6, 191,34,2, 167,33,4, 166,33,1, 168,33,1
1592 DATA 171,33,1, 180,33,4, 185,33,2, 193,33,2, 167,32,1, 170,32,1,186,32,1
1593 DATA 194,32,2, 195,31,1, 175,30,3, 182,30,1, 174,29,4, 181,29,3, 170,28,8
1594 DATA 181,28,3, 169,27,10, 181,27,3, 168,26,16, 166,25,18, 196,25,1, 164,24,21
1595 DATA 196,24,1, 163,23,23, 197,23,1, 162,22,24, 162,21,25, 162,20,25, 162,19,25
1596 DATA 162,18,25, 162,17,24, 162,16,9, 172,16,14, 161,15,6, 173,15,12, 161,14,3
1597 DATA 175,14,8, 176,13,6, 198,13,1, 176,12,6, 198,12,1, 178,11,1, 197,11,3
1598 DATA 196,10,2, 178,9,2, 194,9,1, 177,8,2, 192,8,2, 190,7,3, 188,6,2

1600 DATA 52   :REMark **Europe**
1601 DATA 100,88,6, 98,87,8, 97,86,9, 96,85,5, 102,85,4, 95,84,5, 101,84,5
1602 DATA 93,83,6, 101,83,5, 93,82,7, 101,82,5,93,81,7, 103,81,3, 96,80,3, 101,80,5
1603 DATA 86,80,1,87,79,1, 94,79,1, 96,79,2, 101,79,5, 85,78,4, 94,78,2, 98,78,8
1604 DATA 84,77,2, 87,77,3, 93,77,13, 84,76,2, 87,76,3, 91,76,15, 87,75,1
1605 DATA 90,75,16, 88,74,18, 87,73,19, 88,72,18, 88,71,18, 84,70,7
1606 DATA 95,70,3, 99,70,7, 84,69,7, 94,69,1, 97,69,1, 100,69,6, 83,68,6
1607 DATA 94,68,1, 98,68,1, 101,68,2, 83,67,6, 98,67,2
1608 DATA 101,67,2, 83,66,5, 97,66,2, 102,66,2

1610 DATA 23   :REMark **Greenland**
1611 DATA 64,95,1, 79,95,2, 52,94,2, 56,94,8, 65,94,20, 51,93,2, 55,93,5
1612 DATA 62,93,21, 52,92,5, 60,92,22, 50,91,5, 64,91,17, 65,90,15, 65,89,15
1613 DATA 66,88,13, 65,87,12, 64,86,9, 64,85,6, 79,85,4, 64,84,5, 79,84,3
1614 DATA 64,83,4, 64,82,2

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1616 REMark **Init Game**

1618 **DEFine PROCedure Init_win**
1619 OPEN#4,scr_10x10a10x10:OPEN#3,scr_10x10a10x10:h=.5
1620 WINDOW#4,512,256,gx,gy   :PAPER#4,0:CLS#4
1621 WINDOW#3,280,42,gx+116,gy+183:PAPER#3,0:SCALE#3,26,0,0 :BORDER#3,1,5
1622 WINDOW#2,508,226,gx+2,gy+1   :PAPER#2,0:SCALE#2,130,0,0:BORDER#2,1,3
1623 WINDOW#1,456,162,gx+28,gy+22 :PAPER#1,1
1624 WINDOW#0,508,dy,gx+2,gy+228   :PAPER#0,0:CLS#0:BORDER#0,1,3
1625 **END DEFine**

1627 **DEFine PROCedure QBITS_Title**
1628 CURSOR#2,10,10 :CSIZE#2,2,1:OVER#2,1
1629 INK#2,7:FOR i=0 TO 1:CURSOR#2,166+i,2:PRINT#2,'QBITS Pandemic'
1630 INK#2,2:FOR i=2 TO 3:CURSOR#2,166+i,3:PRINT#2,'QBITS Pandemic'
1631 CSIZE#2,0,0:OVER#2,0:INK#2,7
1632 **END DEFine**

1634 **DEFine PROCedure Game_screen**
1635 CLS#3:PAPER#2,1
1636 FOR i=0 TO 8:BLOCK#2,14,224, 0+i*12,0,1:BLOCK#2,14,224,490-i*12,0,1:PAUSE 2
1637 FOR i=1 TO 8:BLOCK#2,18,180,92+i*18,0,1:BLOCK#2,18,180,394-i*18,0,1:PAUSE 2
1638 QBITS_Title:INK#1,4:SCALE#1,96,0,0:m=.5:**Init_map:Draw_city**
1639 **Draw_OB:Draw_Stat:Draw_IR**:ch=2:**WHO_Symbol 53,122**:INK#2,5
1640 CURSOR#2, 4, 5:PRINT#2,'WHO Headquarters'
1641 CURSOR#2,400, 5:PRINT#2,'Deaths   Cases' :**Skull 162,123**
1642 CURSOR#2,166,168:PRINT#2,'Popu: R: Area:'
1643 CURSOR#2, 42,174:PRINT#2,'MED Centre'   :**MEDCamp 6,30**
1644 CURSOR#2,400,174:PRINT#2,'SPECIALIST'   :**RESearch 206,27**
1645 **END DEFine**

1647 **DEFine PROCedure Draw_OB**
1648 ob$='OUTBREAKS':ob=1:x=12:a=1.9:INK#2,7
1649 FOR i=1 TO 9:CURSOR#2,4,50+i*9:PRINT#2,ob$(i)
1650 FOR i=1 TO 7
1651 y=45+i*7:INK#2,0:FILL#2,1
1652 ARC#2,x-a,y+a TO x+a,y+a,-PI TO x+a,y-a,-PI TO x-a,y-a,-PI TO x-a,y+a,-PI
1653 FILL#2,0:INK#2,2
1654 ARC#2,x-a,y+a TO x+a,y+a,-PI TO x+a,y-a,-PI TO x-a,y-a,-PI TO x-a,y+a,-PI
1655 END FOR i
1656 INK#2,7:OVER#2,1:CURSOR#2,x,y,-3,-4:PRINT#2,'1':OVER#2,0
1657 **END DEFine**
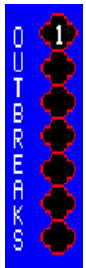
1659 **DEFine PROCedure Draw_Stat**
1660 x1=194:x2=215:y1=98:y2=90:INK#2,7:CURSOR#2,464,71:PRINT#2,'STATUS'
1661 FILL#2,1:INK#2,0:LINE#2,x1,y1 TO x2,y1 TO x2,y2 TO x1,y2 TO x1,y1
1662 FILL#2,0:INK#2,2:LINE#2,x1,y1 TO x2,y1 TO x2,y2 TO x1,y2 TO x1,y1
1663 **END DEFine**

```
1665 DEFine PROCedure Draw_IR
1666 INK#2,7:CURSOR#2,446,96:PRINT#2,'INFECTION'
1667 CURSOR#2,447,104:PRINT#2,'RATE':x=210:y=64:INK#2,0
1668 FILL#2,1:CIRCLE#2,x,y+2,2.5   :FILL#2,0
1669 FILL#2,1:CIRCLE#2,x-2.5,y-2,2.5:FILL#2,0
1670 FILL#2,1:CIRCLE#2,x+2.5,y-2,2.5:FILL#2,0 :INK#2,2
1671 CIRCLE#2,x-2.5,y-2,2.5:CIRCLE#2,x,y+2,2.5:CIRCLE#2,x+2.5,y-2,2.5
1672 FILL#2,1:INK#2,0:CIRCLE#2,x,y,2:FILL#2,0
1673 END DEFine


1675 DEFine PROCedure Game_reset
1676 LOCal w,x,y:RESTORE 1677:FOR i=1 TO 7:READ w,x,y:BLOCK#2,w,10,x,y,1
1677 DATA 48,4,16,36,400,16,36,460,16,30,198,168,6,252,168,84,300,168
1678 STRIP#2,0:ob=1                                  :REMark Outbreaks
1679 STRIP#2,0:FOR i=2 TO 7:CURSOR#2,12,101-i*7,-3,-4:PRINT#2,' '
1680 rate=2:INK#2,7:CURSOR#2,210,64,-3,-4:PRINT#2,rate          :REMark Infections
1681 STRIP#2,1:BLOCK#2,110,42,0,182,1:BLOCK#2,110,42,394,182,1
1682 CLS#3:INK#3,7:BLOCK#2,44,11,454,57,0                :REMark Status
1683 Draw_city:City_Shuffle:dc=0:ac=0:vn=1               :REMark Deaths Cases
1684 CURSOR#3,40,6:PRINT#3,'WHO Announce New Global Pandemic'
1685 FOR i=1 TO 4:Infect virus(i),1:Infect virus(i+4),2:Infect virus(i+8),3
1686 Init_MEDCtr:Init_Roles:INK#3,5
1687 CURSOR#3,4,1:PRINT#3,'Event:  Action:  ¼ ½ (h)':BLOCK#3,10,3,120,5,5
1688 ch=3:Flight 7,9:Vaccine 22.6,6:MEDCamp 36,6.5:RESearch 48,4
1689 Rate_HGL cn:Copter 79.5,9:AVirus 2,95,5:ViewInfo 109,6    :REMark Activities
1690 END DEFine


1692 DEFine PROCedure Init_MEDCtr
1693 DIM MEDCtr(5):RESTORE 1705:INK#3,7:CLS#3
1694 CURSOR#3,40, 6:PRINT#3,'Select WHO HQ & Specialists Team'
1695 CURSOR#3,26,22:PRINT#3,'(N)ew York (L)ondon (D)elhi (B)eijing'
1696 k=CODE(INKEY$(-1)):CLS#3:INK#2,7
1697 SELect ON k
1698  =66 ,98:cn=41
1699  =68,100:cn=35
1700  =78,110:cn=13
1701  =REMAINDER :cn=18
1702 END SELect
1703 CURSOR#2,4,16:PRINT#2,city$(cn)&FILL$(' ',8-LEN(city$(cn)))
1704 FOR i=1 TO 4:READ MEDCtr(i):MED_HGL 5,i
1705 DATA 13,18,35,41 :MEDCtr(5)=cn
1706 END DEFine


1708 DEFine PROCedure Init_Roles
1709 DIM Team$(8,11),Team(8,2),Role(8):RESTORE 1715:ch=2:INK#ch,5
1710 FOR i=1 TO 8:READ t$:Team$(i)=t$:Team(i,2)=0:Role(i)=i
1711 FOR t=8 TO 3 STEP -1
1712  ran=RND(1 TO t-1):temp=Role(t):Role(t)=Role(ran):Role(ran)=temp
1713 END FOR t
1714 INK#2,3:FOR i=1 TO 4:Role_HGL 5,i:Team(i,1)=cn
1715 DATA 'Operations ','Planner    ','Dispatcher ','Researcher '
1716 DATA 'Scientist  ','Doctor     ','Field Medic','Quarantine '
1717 END DEFine
```

1719 **DEFine PROCedure Init_Info**
1720 DIM Info$(8,42):RESTORE 1721:FOR i=1 TO 8:READ Info$(i)
1721 DATA 'MED Centre - Relocate to any City (R:>0)'   :REMark Operations
1722 DATA 'R: rate - Reduce with a Free Turn'   :REMark Planner
1723 DATA 'Flight - Extended to any City'   :REMark Dispatcher
1724 DATA 'Release Vaccine - with one less Credit'   :REMark Researcher
1725 DATA 'Banking Research Credits - Gain extra Turn' :REMark Scientist
1726 DATA 'Vaccine Release - Can be from any City'   :REMark Doctor
1727 DATA 'Vaccine Delivery - Extended to any City'   :REMark Field Medic
1728 DATA 'R: rate - reduced to Zero on entering City' :REMark Quarantine
1729 **END DEFine**

1731 REMark **Game Introduction**

1733 **DEFine PROCedure Intro_Pandemic**
1734 LOCal mx,m$:ch=2:BLOCK#2,504,181,0,0,0
1735 BLOCK#2,112,50,0,174,0:BLOCK#2,112,50,392,174,0
1736 **QBITS_Title**:STRIP#2,0:INK#2,5:RESTORE 1741
1737 FOR i=1 TO 4:PAUSE 5:READ mx,m$:CURSOR#2,mx,20+i*10:PRINT#2,m$
1738 PAUSE 5:SCALE#1,180,-80,-20:m=.1:INK#1,2:**Init_map:WHO_Symbol 34,121**
1739 **WHO_Symbol 180,121**:ch=2:**Intro_Roles:MEDCamp 66,32:MEDCamp 148,32**
1740 **RESearch 14,16:Copter 34,20:Vaccine 182,15:AVirus 2,196,15**
1741 DATA 60,' As Chief Medical Advisor to WHO the World Health Organisation'
1742 DATA 60,'a team of Specialists are assembled to help you fight a new and'
1743 DATA 60,'Deadly Virus. Your aim is to Contain the Outbreak, Find a Cure,'
1744 DATA 96,'Vaccinate the Population and Eradicate the Disease.'
1745 **END DEFine**

1747 **DEFine PROCedure Intro_Roles**
1748 LOCal x,y,s,c,r:ch=2:RESTORE 1754
1749 INK#2,5:CURSOR#ch,208,166:PRINT#2,'WHO Specialists'
1750 FOR i=1 TO 8
1751   READ x,y,s :**Specialist 2,x,y,s**:PAUSE 5
1752   READ c,r,r$:INK#2,5:CURSOR#2,c,r:PRINT#2,r$
1753 END FOR i
1754 DATA 12,75,4,48, 90,'Researcher',   204,75,8,392, 90,'Quarantine'
1755 DATA 24,65,3,70,108,'Dispatcher',   192,65,7,366,108,'Field Medic'
1756 DATA 36,55,2,24,144,'Planner',   180,55,6,440,144,'Doctor'
1757 DATA 48,45,1,36,160,'Operations',   168,45,5,412,164,'Scientist'
1758 **END DEFine**

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1760 REMark **League Table**

1762 **DEFine PROCedure Init_League**
1763 DIM SName$(3,12),HScr$(3,5):**LLoad**
1764 **END DEFine**

1766 **DEFine PROCedure LReset**
1767 FOR a=1 TO 3:SName$(a)='?':HScr$(a)=0:**LSave**
1768 **END DEFine**

1770 **DEFine PROCedure HighScore**
1771 FOR a=1 TO 3
1772　IF score%>HScr$(a)
1773　　HScr$(a)=score%:**LTable:LName:LTable**:EXIT a
1774　END IF
1775 END FOR a
1776 **END DEFine**

1778 **DEFine PROCedure LTable**
1779 CSIZE#3,2,0:OVER#3,1:INK#3,7:CLS#3
1780 CURSOR#3,12,0:PRINT#3,'WHO Team League Table'
1781 CSIZE#3,0,0:OVER#3,0:ch=3:WHO_Symbol 15,12:INK#3,5
1782 FOR i=1 TO 3
1783　CURSOR#3, 62,i*10:PRINT#3,'Score: ':CURSOR#3,160,i*10:PRINT#3,'Name: '
1784　INK#3,7:CURSOR#3,104,i*10:PRINT#3,FILL$(' ',6-LEN(HScr$(i)))&HScr$(i)
1785　CURSOR#3,196,i*10:PRINT#3,SName$(i):INK#3,5
1786 END FOR i
1787 **END DEFine**

1789 **DEFine PROCedure LName**
1790 OPEN#9,con_10x10a10x10_12:WINDOW#9,72,10,314+gx,184+gy+a*10
1791 PAPER#9,0:CLS#9:INK#9,7:INPUT#9,SName$(a):CLOSE#9:**LSave**
1792 **END DEFine**

1794 **DEFine PROCedure LSave**
1795 DELETE Drv$&'QBPanLT':OPEN_NEW#99,Drv$&'QBPanLT'
1796 FOR i=1 TO 3:PRINT#99,SName$(i)\HScr$(i)
1797 CLOSE#99
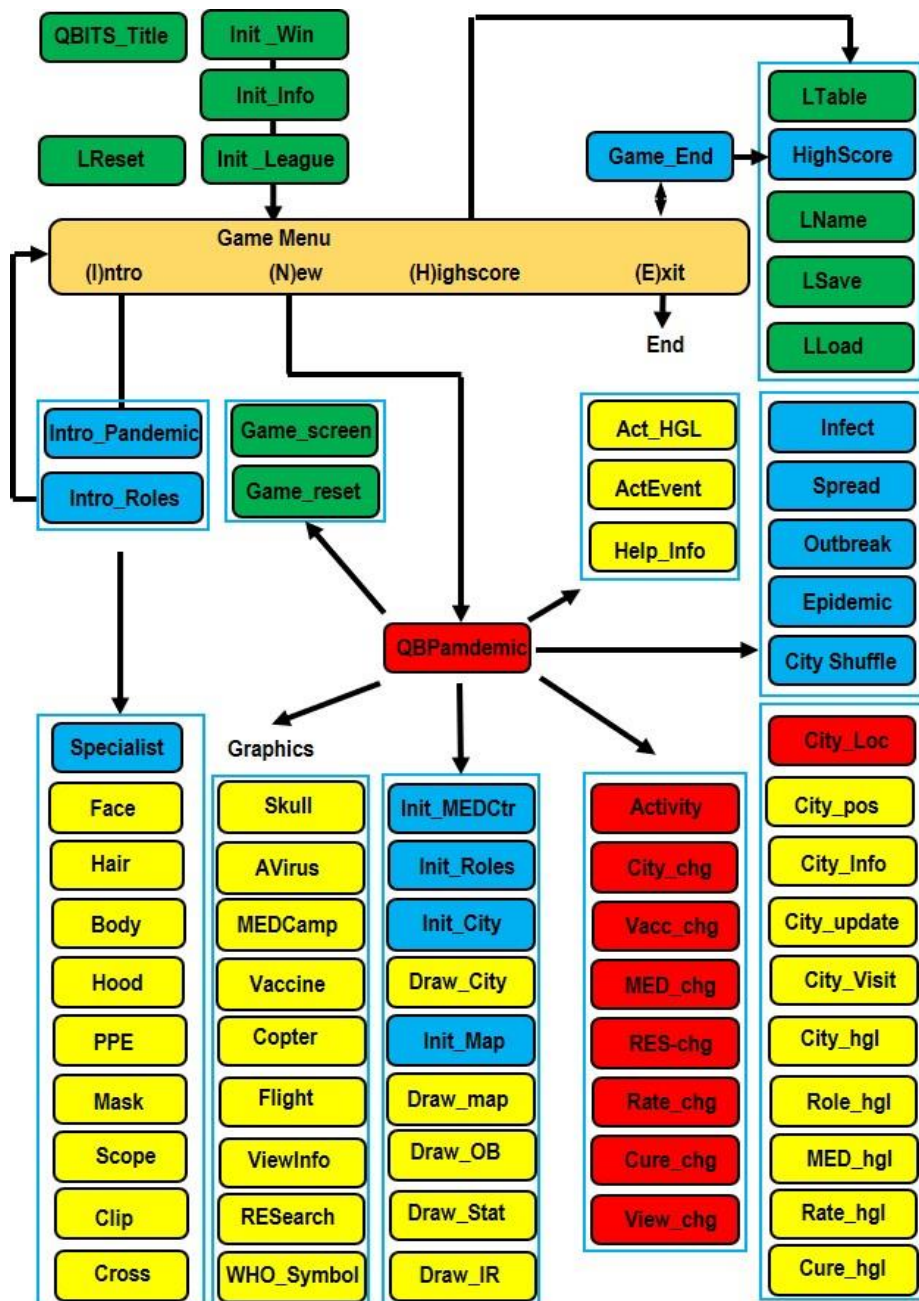1798 **END DEFine**

1800 **DEFine PROCedure LLoad**
1801 OPEN_IN#99,Drv$&'QBPanLT'
1802 FOR i=1 TO 3:INPUT#99,SName$(i)\HScr$(i)
1803 CLOSE#99
1804 **END DEFine**

QBITS Pandemic Procedures

QL2K emulator

QPC2 emulator