

# About Outlines

This sheet contains information regarding a hierarchical outline including multiple choice and describes how to generate two versions of an outline.

We need a text file of your outline with each line designating an element of your hierarchy with tabs indicating the sub levels.

There should be no spaces between lines and no tabs within the name of the element. If the current line is a subset of the line above then it should have one more tab than its parent.. no more. (We don't want grandchildren without parents!)

V(ma) will assume it has found the end of the outline by a blank empty row.

**It is important to remember that the maximum number of subcomponents for a given node is 12 and that the maximum number of sub levels is also 12.**

The following is an example of a criteria outline without numerical prefixes.

```
Disk Evaluation Project
  System Strategy
    Configuration
      Base
      Proposed
      Optimal
        Read Biased Environment
        Write Biased Environment
        Unbiased Environment
        DB2 Environment
      RAID level
      Upgrade Increment
      Microcode
        Developed
        Purchased
      ESCON
      Data Compression
    Services
      Warranty
      On Site Service
      Response Time of Service
        Guaranteed(Yes or No)
      Diagnostic Capabilities
        Remote or Local
    Multi-Platform Support
    Software Support
      Currency to IBM
      Currency to Other Vendors
      Concurrent copy Availability
      Concurrent copyAlternative
    Migration
    Futures
  Availability
    Mean Time Between Failure
    Mean Time Between Data Unavailable
    Hot Spares
      Number Proposed
      Optimal Number
    RAID 5 Support
    Dynamic Sparing
    Fault Tolerance
      Complete
      Partial
      None
    Nondisruptive Maintenance
```

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- Capacity
  - Microcode
  - Hardware replacement
- Single Points of Failure
- Loss of Data Possibility
- Loss of Access to Data Possibility
- Environmental
  - Footprint
    - Base Configuration
    - Proposed Configuration
  - Power Connections
  - Telephone Connections
  - Heat Output
  - Power Consumption
- Capacity
  - Single Footprint Capacity(Minimum)
  - Single Footprint Capacity(Maximum)
  - Proposed Capacity
    - Useable
    - Nonuseable
  - Volume Suballocation availability
- Performance
  - Cache
    - Location
    - Amount
    - Read Friendly
    - Write Friendly
  - Response Time
    - Percent Improved over 3390
    - Per IO in Milliseconds
  - Number of Channels to Controller
  - # of Channels between Controller and DASD
  - Maximum IO's per Second
  - Guarantee
- Cost
  - Price per Megabyte
  - Chargeable Upgrades
  - Environmental

The following is an outline with numerical prefixes (the only kind V(ma) will accept). It helps some people to organize the outline, particularly if it is long and complex

If your prefix number scheme is incorrect, V(ma) will still accept the data and the correct prefix will be put in the final resulting spreadsheet.

Also notice that the two outlines are in sync, the previous one merely had empty tabs while this one has numerals with tabs.

## Disk Evaluation Project

1				System Strategy
1	1			Configuration
1	1	1		Base
1	1	2		Proposed
1	1	3		Optimal
1	1	3	1	Read Biased Environment
1	1	3	2	Write Biased Environment
1	1	3	3	Unbiased Environment
1	1	3	4	DB2 Environment
1	1	4		RAID level
1	1	5		Upgrade Increment
1	1	6		Microcode
1	1	6	1	Developed
1	1	6	2	Purchased

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1	1	7	ESCON
1	1	8	Data Compression
1	2		Services
1	2	1	Warranty
1	2	2	On Site Service
1	2	3	Response Time of Service
1	2	3	1 Guaranteed(Yes or No)
1	2	4	Diagnostic Capabilities
1	2	4	1 Remote or Local
1	3		Multi-Platform Support
1	4		Software Support
1	4	1	Currency to IBM
1	4	2	Currency to Other Vendors
1	4	3	Concurrent copy Availability
1	4	4	Concurrent copy Alternative
1	5		Migration
1	6		Futures
1			Availability
1	1		Mean Time Between Failure
1	2		Mean Time Between Data Unavailable
2	3		Hot Spares
2	3	1	Number Proposed
2	3	2	Optimal Number
2	4		RAID 5 Support
2	5		Dynamic Sparing
2	6		Fault Tolerance
2	6	1	Complete
2	6	2	Partial
2	6	3	None
2	7		Nondisruptive Maintenance
2	7	1	Capacity
2	7	2	Microcode
2	7	3	Hardware replacement
2	8		Single Points of Failure
2	9		Loss of Data Possibility
2	10		Loss of Access to Data Possibility
2			Environmental
2	1		Footprint
2	1	1	Base Configuration
3	1	2	Proposed Configuration
3	2		Power Connections
3	3		Telephone Connections
3	4		Heat Output
3	5		Power Consumption
3			Capacity
3	1		Single Footprint Capacity(Minimum)
3	2		Single Footprint Capacity(Maximum)
4	3		Proposed Capacity
4	3	1	Useable
4	3	2	Nonuseable
4	4		Volume Suballocation availability
4			Performance
4	1		Cache

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4	1	1	Location
5	1	2	Amount
5	1	3	Read Friendly
5	1	4	Write Friendly
5	2		Response Time
5	2	1	Percent Improved over 3390
5	2	2	Per IO in Milliseconds
5	3		Number of Channels to Controller
5	4		# of Channels between Controller and DASD
5	5		Maximum IO's per Second
5	6		Guarantee
5	Cost		
5	1		Price per Megabyte
5	2		Chargeable Upgrades
6	3		Environmental
6			

To begin the compilation process, one opens the file containing the outline and activates the "Diamond " toolbutton in the "More V(ma)" pull-down menu. The following message will be generated:

You should be ready with the file containing the outline you want compiled open. If this is the first time using this function, it would be wise to first use one of the outline files in the Case Histories Example folder in your V(ma) folder. That would enable you to check the compiled results with the corresponding V(ma) workbook from the case example folder. Once compiled, you could also go one step further and insert the original Voting Matrix data into the newly compiled Voting Matrix sheet and then Tally, Load and Calculate the data and compare the results with the original Example's results.

The opened outline can be an ascii notebook file or an Excel file.

If the outline is an Excel file, the first line of the outline should be at cell A1.

No other files should be open.

1. There should be no empty lines in the outline and avoid using any characters other than the alphabet and numerals. The one exception is the underscore character that can serve as a valid space between words.

2. Tabs should be used to indent subcomponent levels in the outline.

Now if you have not saved a copy of your outline elsewhere, do so now by clicking on the cancel button.

When you are ready, repeat the request for this function with the outline open.

The file containing your outline should be open and ready to be compiled.

Your outline will be compiled as a V(ma) workbook and saved using the same name.

When the compilation is completed the following message will appear:

The current workbook has been compiled and ready to be saved.

Make sure that the file is saved using the SAVED AS command and that it is saved as an Excel file with the extension of .XLS. It will then be ready for the input of the Decision Options' criteria scores and weights.

When the compilation is finished, you will have a workbook file with a calculation engine that will process your input according to the basic priority levels defined by your outline.

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Those priorities will be further fine tuned by the weights of importance that will be inputted to your importance weights grades column.

The merit scores of each comparative (product) candidate will be inputted into a grades column for each.

When that is accomplished the next step will be to execute a calculation and sort process that will score each product for each node in the hierarchy and sort the results of each node by (product) candidate.

The outline levels will also be synchronized with Excel's outline function so that you will be able to expand and contract the spreadsheet to view the results by various levels of importance.

Bottom line, we want you to know how well or poorly Decision Options scored at every level of the hierarchy.

## Multiple Choice Nodes:

The majority of comparative analyses can be solved with the tools already described. However, there is a condition where an endpoint's score ought to be or has to be expressed as a consensus of multiple opinions or choices.

V(ma) provides a special feature called the Multiple Choice Node or "mc".

An mc node is treated as a regular node with the following difference:

The wgts of the mc node actually represent a score value. And the a given Decision Option is treated as a wgt of importance. i.e. the exact opposite of a normal node.

To understand the reason for the change, we have to understand what the mc node provides as a mini tool in the V(ma) methodology.

Let's assume the element to be scored and weighted is the quality of food in a hospital.

And that the scores can range from Outstanding (A), Very Good (B), Good (C), Fair (D), Poor (E) and Terrible (F).

The node would look like this in the outline.txt

```
mc      Quality of Food
        1 Outstanding
        2 Very Good
        3 Good
        4 Fair
        5 Poor
        6 Terrible
```

The weights of the six subcomponents would be set to A thru F, and for each hospital there would be a number alongside each subcomponent indicating the poll count of exiting patients.

For example, of the patients in hospital xyz, 100 patients chose "Very Good", and 20 chose "Good"

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and 10 chose "Poor" then the score would be calculated by taking 100/130 of a B score, 20/130 of a C score and 10/130 of a E score.

The scores for the other hospitals would also have multiple choice numbers, and so on.

This tool is most effective when an expert judgement of a score is not as good as a poll of choices.

The following is an example of an outline with multiple choice nodes.

A multiple choice node's name is preceded by the letters "mc" and a tab.

Its subcomponents are located directly below the mc node's real name.

Here is one alongside itself with prefixes and hierarchical its levels colored

## Hospital Comparisons

### Patient's Profile

mc: # prior times admitted to this hospital for one or more nights?

First time (F)

One other time (D)

Two other times (C)

Three or more times (B)

mc:Treated before as an out-patient or an emergency room patient?

Yes (A)?

No (F)?

mc: Who chose this hospital?

Doctor chose (F)

Patient or family member chose (D)

Someone else chose (C)

Insurance Insurance/health plan requires it (B)

Insurance/health plan encourages it (A)

mc: Admitted to the hospital

Through the Emergency Room (F)

Through the Admitting Office (D)

Other (specify) (C)

Transferred from another institution (B)

### Admin Services

Admission entering the hospital

Efficiency of the admitting procedure

Preparation for admission

Attention of admitting staff to your individual needs

Billing by hospital

Explanation about costs and how to handle your hospital bills

Efficiency of billing

Discharge leaving the hospital

Discharge procedures

Discharge instructions

Hospital C

Hospital C

1

1

1

1

1

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Coordination of care after discharge	2
<b>Medical services</b>	3
mc: How much pain did you experience?	3
A lot of pain (F)	3
Quite a bit of pain (D)	3
Some pain (C)	3
A little pain (B)	3
No pain at all (A)	3
Your daily care in the hospital	3
Consideration of your needs	3
Coordination of care	3
Sensitivity to problems	3
Other medical staff	3
IV starters	3
Laboratory staff	3
X-ray staff	3
Physical therapy staff	3
Your nurses	3
Skill of nurses	3
Attention of nurses to your condition	3
Nursing staff response to your calls	3
Concern and caring by nurses	3
Information given by nurses	3
Your doctor(s)	3
Attention of doctor to your condition	3
Availability of doctor	3
Concern and caring by doctors	3
Skill of doctors	3
Information given by doctors	3
Coordination	3
<b>Support services</b>	4
mc: Time to get you settled in room	4
Excellent (A)	4
Very Good (B)	4
Fair (D)	4
Poor (F)	4
mc: Help needed with everyday activities	4
A lot of help (F)	4
Quite a bit of help (D)	4
Some help (C)	4
Little help (B)	4
Never needed help (A)	4
mc: Special or regular diet?	4
Regular or unrestricted diet (F)	4
Liquid diet (D)	4

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Special diet (other than liquid) (C)	4
Don't know (B)	4
Living arrangements	4
Privacy	4
Condition of your room	4
Supplies and furnishing	4
Restfulness of atmosphere	4
Quality of food	4
Signs and directions	4
Hospital building	4
Parking	4
Provisions for family and friends	4
Keeping you informed	4
Ease of getting information	4
Instructions	4
Informing family or friends	4
Support staff	4
Housekeeping staff	4
Transportation staff	4
Patient's summary	5
Looking back on your care	5
Hospital quality	5
The outcome of your hospital stay	5
Hospital image	5
mc: Amount of time in hospital	5
About right (F)	5
Too short (D)	5
Too long (C)	5
Not sure (B)	5
Overall satisfaction with hospital	5
Care received so good to recommend hospital	5
Always clear which doctor was responsible for my care.	5

End of This sheet of notes . . . . .

What happens if a mistake is encountered?

Should the context of your outline be illegal to the rules of compilation, you will be alerted with an error message and a description of the invalid sequence. The line and column number will be saved in cells A:1 and B1.

Fix the mistake by making changes in the appropriate line and column and then execute the Diamond toolbar in the More V(ma) pull down menu.

The Diamond compiler has been written to compile brand new outlines or to recompile outlines that have been corrected or modified and then completely recompiled and recalculated.

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If you take the time to practice by using one of the outlines in the CD library, you will be better prepared to process your own outline later.

One more note.

If you only have one set of votes for the wgts and the Decision Options, there is no need to use the voting matrix. One merely inputs the wgts and scores into the "Grade Columns" which are shaded in yellow. The first smiling face toolbar called "Show Grades and Winners" will provide you with a sheet1 that will only display those columns needed to input the data. When all the wgts and scores have been inputted, the "Club" toolbutton will calculate the results and produce a finished workbook ready to generate Vectorgrams.

We recommend that you use the Voting Matrix even if there is only one set of scores. It makes for a much simpler situation should you want to add more than one set.

However, the technique of introducing scores directly into the grade columns and recalculating is extremely useful for some one who wishes to play "What if" by changing scores temporarily to see how certain changes might effect the final result. The beauty of this is one merely reloads the voting matrix and recalculates to return to the original results.

## Heart Toolbutton Function:

The fuction of the "Heart" toolbutton is to generate an outline sheet from the main Sheet1 of a project's Excel workbook. During the early development of a project, the hierarchy will undergo many changes and when it finally is fininished, it is wise to capture the outline and store it externally from the workbook as a backup. Originally it was designed to automatically create a separate sheet but it has now become more practical for the outline to be stored as a new sheet in the same workbook. Excel provides a very easy way to copy a given sheet to a new sheet when the time comes to store the outline separately.

Further, with this version of the software, there is an option to generate the outline as a two dimensional chart which serves as an excellent tool for briefing people about the details of the hierarchy and that is meant to stay with the workbook. There is a 2D outline sheet as well as the standard outline sheet in this help workbook which can be accessed by the goto sheet buttons below.

To see the outline for the Storage System that is this workbook or its two dimensional outline

Return to

**Outline**

Return to

**Intro and 2D Outline**

Return to

**Voting Matrix**

Return to

**V(ma) System Diagram**