

Prime Option

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Making Decisions

- What
- When
- Who
- How

Making Decisions - What?

- Purpose/objectives
- Costs
- Benefits
- Information
- Expertise and skills

Making Decisions – When?

- Design
- Purchase/Sale
- Tender

- Now
- Tactical
- Strategic

Making Decisions – Who?

- Management
- Customers
- Experts
- Accountants
- Vendors
- Owners
- Victims
- Beneficiaries
- Actors

Making Decisions – How?

- Controls
 - People (Projects, Committees, Teams..)
 - Audit trail
 - Consistency and balance
- Methods
 - Must Have and Like To
 - Check lists
 - FUD (Fear Uncertainty and Doubt)
 - Pressure, Promises, Politics..
 - Financial
 - Deferred costs
 - Prime Option

Making Decisions

**WHEN
WHO
HOW
INFLUENCES
THE
DECISION**

Who Or What Decides?

- Functional fit?
 - 80%-20% rule?
 - Checklists?
 - Function points?
- Short list, Must have and like to?
- Vendors?
- Financials (NPV, Payback, IRR)?

Who Or What Decides?

- Customers?
- Requirements?
- Who scream the loudest?
- Technology?
- Techniques?
- Assumptions?
- Exclusions?
- Inclusions?

Who Or What Decides?

Who is driving decision making process?

Who is in control?

Bad Decisions

'Must have' and 'Like to' faults

- Your requirement for staff member states
 - Must have at least 3 years experience
 - Like to have Excel skills
- 3 candidates are considered:

Candidate	Experience	Excel
A	5	Yes
B	10	No
C	7	No

Bad Decisions

'Must have' and 'Like to' faults

- 'A' is selected

Candidate	Experience	Excel
A	5	Yes
B	10	No
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Bad Decisions

‘Must have’ and ‘Like to’ faults

- **Must have and like to method**
 - Assumes all ‘Must have’
 - Are equal
 - Will be realized equally
 - Increases the importance of ‘Like to’
 - The final choice is usually determine by most obscure features

Criterion importance is governed by its intrinsic and perceived value and the number of criteria used

Financial Metrics

- Pay back period
- Cash Flows
- Net Present Value (NPV)
- Hurdle rate
- Internal Rate of Return (IRR)
- Etc...

Financial Metrics

- Assumptions used
 - One-dimensional (\$)
 - Linear
 - Summative
 - All costs and benefits are identified and quantified
- Usually not done
 - Risks assessment
 - Sensitivity analysis
- Cost and benefits are treated as given and not as estimates
- Skewed towards costs

Dollar only decision is a high risk decision

What Is Dollar Worth?

- Money has no intrinsic value
- The most important decisions in your life are not money based
 - Marriage
 - Having children...
- The differential value of money is inversely proportional to the decision importance
 - Life and death
 - Company takeovers
- Is it in the budget?
- Utility functions

Good Management

- Planning, Organizing and Leading
- Controlling
 - Purpose
 - Processes , methodology and technologies
 - Accuracy , consistency, balance and integrity
 - Authority and accountability
 - Acceptance
 - Time frame, effort , costs and benefits
 - Documentation, validation , verification and audit trail
 - Maximizing information value, use of expertise and skills

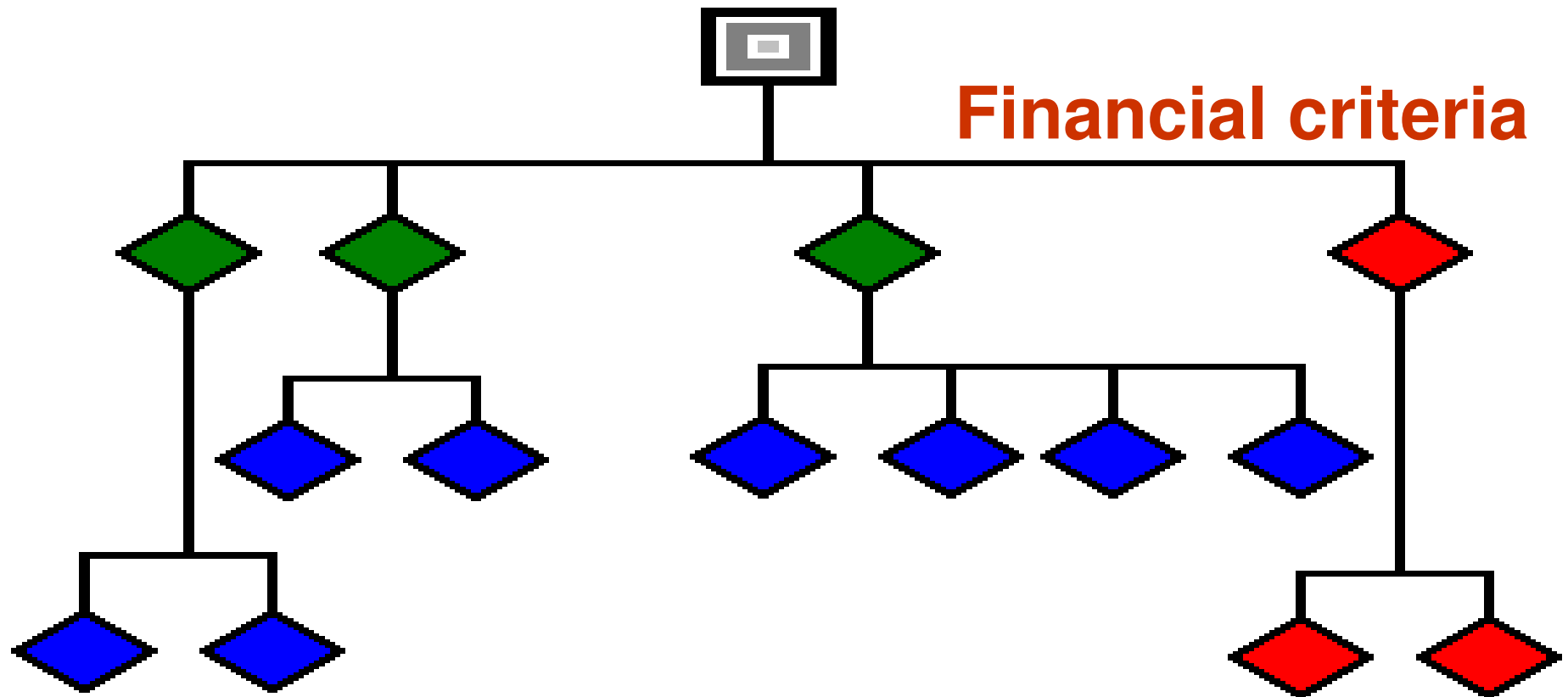
Prime Option is a good management tool

Decision Controls

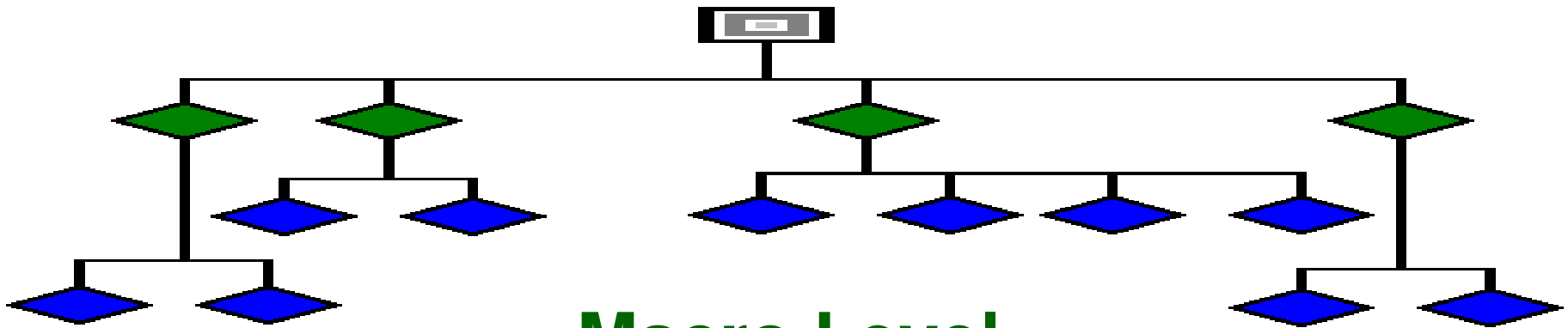
- Diagrams
 - Decision trees, brain maps and fish bones
 - Data and processes maps
 -
- Documents
 - Plans
 - Check lists
 - Spread sheets
 -

Prime Option is a single information store for the decision made

Dollar only decision is a high risk decision



Lower Risk Decision Hierarchical Decomposition



Macro Level

**What, when, strategic and
business driven**

Micro Level

**How, who, hands on, expert and
technology**

Lower Risk Decision Hierarchical Decomposition

- Criteria identifies what is important and helps to select the prime option
- Actors
 - Owners, Decision makes, Experts , Facilitators..
- What
 - Purpose, Accuracy , Time frame, Effort..
- How
 - Prime Option

Prime Option Decision Making

The Nature Of Decision Making

- Process is interactive and iterative
- Involves group of persons
- Multiple criteria
- Conflicts among criteria/objectives
- Multiple options/alternatives

Decision Making Needs

- Improvement
- Standard process
- Consistency , continuity and logical soundness
- Documentation, transparency and audit trail
- Extension of decision space beyond the financial black box

Multi Criteria Decision Analysis (MCDA)

- Number of techniques
- Multiple Factor Evaluation Process (MFEP)
- Analytical Hierarchic Process (AHP)
 - Is over 30 years old
 - Most used MCDA method
- Prime Option supports MFEP, AHP and statistical significance testing

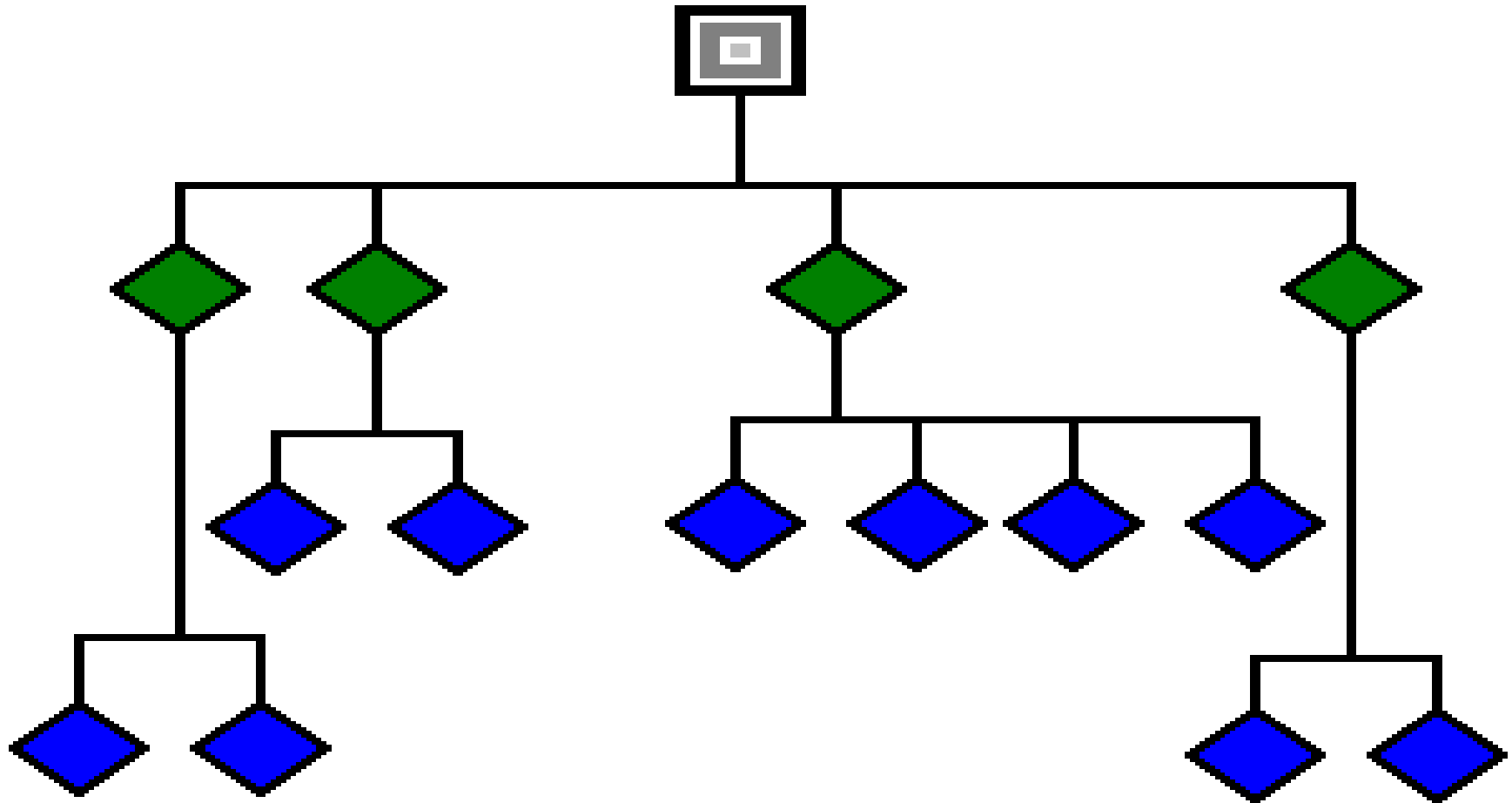
MFEP Vs AHP

Item	AHP	MFEP
Comparisons	Direct	Multiple
Consistency and balance	Yes	No
Effort for N items	$N*(N-1)/2$ Intense	N Quick
Solution space	$9*N*(N-1)/2$	S^N Where S is scale
Consistent solutions	$<3^N$	N/A
Easier validation and verification	Yes	No
Error prone and easily 'fixed' (dominance)	Robust	No controls
Prime Option inference engine	Yes	No

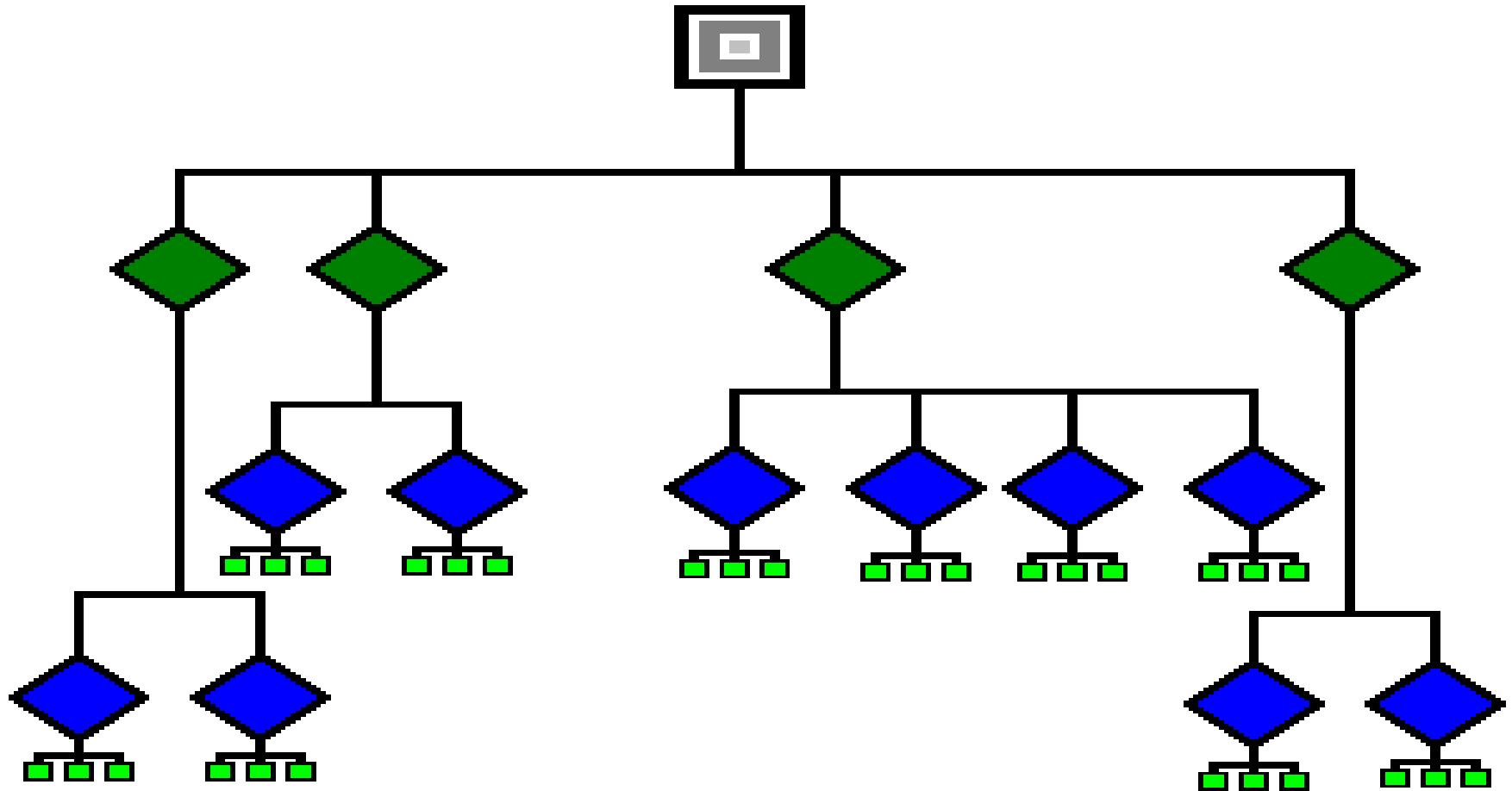
Multi Criteria Decision Analysis (MCDA)

- Decision is decomposed into a hierarchy of criteria
- Qualitative and quantitative information is compared using informed judgments to determine relative weights
- Options are judged within lowest criteria
- Calculated best option
- Similar to hierarchical problem decomposition used in IT

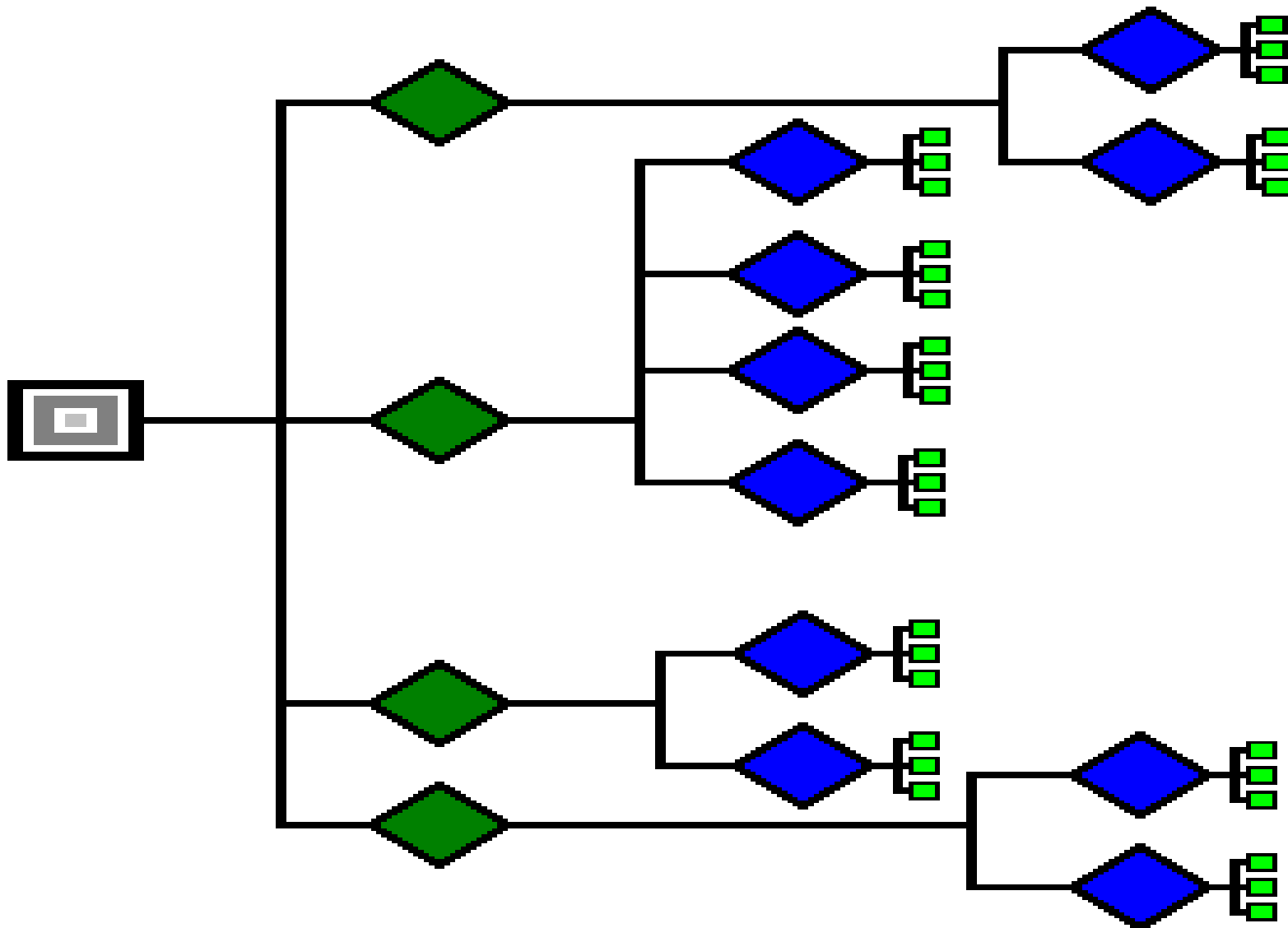
Criteria Tree



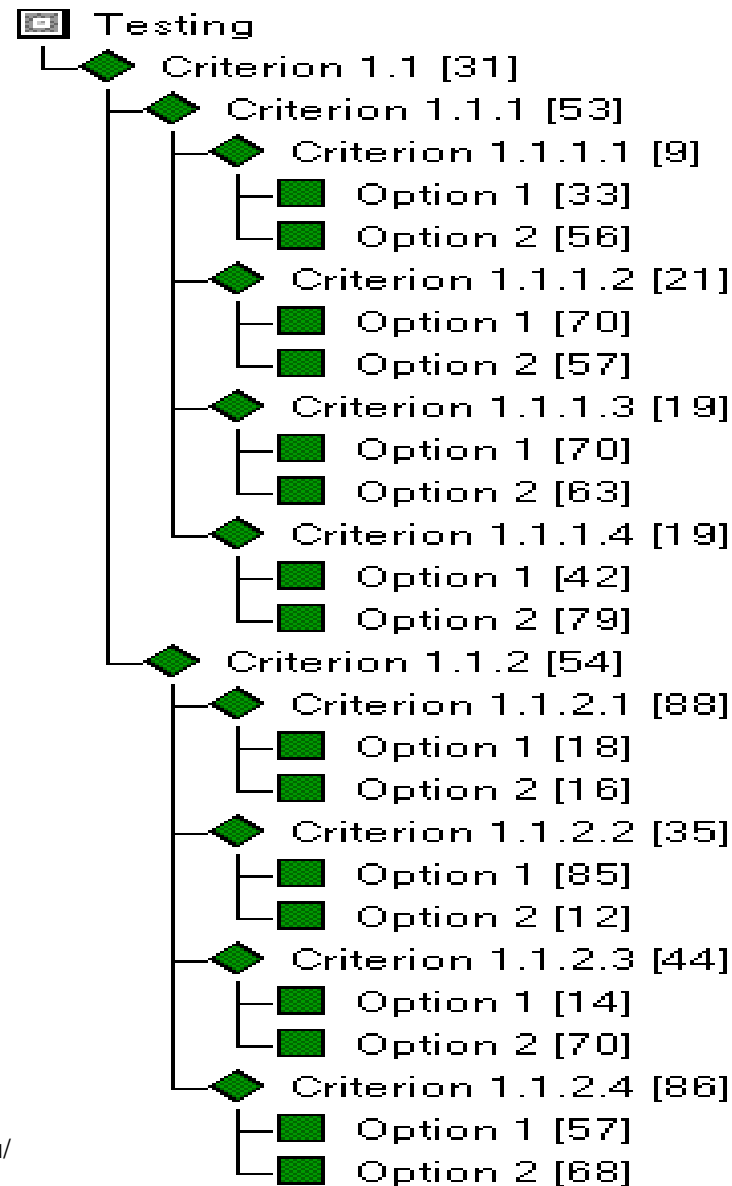
Criteria And Options Tree



Criteria And Options Tree



Prime Option Representation



Applications

- Strategic planning
- Personal assessment
- Design
- Marketing
- Software selection and design
- Town planning
- Risk assessment
- Etc., etc., etc..

Prime Option Design Objectives

- Must provide standard framework for decisions
- Must support hierarchical problem decomposition
- Must provide internal consistency and logical soundness
- Must provide openness , transparency and audit trail
- Must encourage group decisions
- Must provide extension of decision space beyond the financial black box
- Must be easy to use and understood
- Must provide building on existing knowledge

Prime Option Features

- Windows explorer like display
- Supports MFEP (ratings) , AHP (pairwise comparisons) and significance testing
- Attached files, hyperlinks, Excel interface and reporting
- Final copy
- Templates
- Prime Option Viewer

Prime Option Assumptions

- No criteria and/or options overlap
- All judgments are in same direction
- All judgments are consistent, balanced, knowledge and expert based
- All required criteria and options are identified and considered
- Principle of hierarchical solution synthesis is applicable
- All the relevant information is considered
- Anticipated future states are realized

Prime Option History

- 1992 Best Choice Windows 3.1 version
- Some of the uses
 - IT (Software selection and design)
 - Sydney Olympics Bid
 - School grading
 - Building index
- 2004 Best Choice upgraded to .Net
Version is now called **Prime Option**

Prime Option

**is a flexible and easy to use tool
that gives you the capability to
improve your decisions**

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