

Design of parameters of visual grammar with reference to Business management

SPECIAL PROJECT

BY

J.BHASKAR

GUIDE

Prof.R.K.JOSHI

डॉ. व. के. पुस्तकालय

I. D. C. LIBRARY.

Industrial Design Centre

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APPROVAL SHEET

This special project 'DESIGN OF PARAMETERS OF VISUAL
GRAMMAR WITH REFERENCE TO BUSINESS MANAGEMENT'
by J.BHASKAR is approved in partial fulfillment of the requirements for the Masters Degree of Design in Industrial Design

Guide: Prof R.K.JOSHI

Date

Place: I.D.C. I.I.T Bombay

Acknowledgements

My sincere thanks to **Prof R.K.JOSHI** for his valuable guidance and encouragement.

To Sri **DEO** for suggesting this project.

To the faculty members and my colleagues for their valuable suggestions.

To my friend **B.Vaidyanathan** for helping me in drafting and typing this report.

J.BHASKAR

DESIGNING OF PARAMETERS OF VISUAL GRAMMAR WITH REFERENCE TO BUSINESS MANAGEMENT

Introduction

Business management science is an interdisciplinary science and is quite new to our country. The various concepts and terms used are not easily understood not only by students but also by practitioners themselves. The communication at times is quite difficult particularly in a multilingual situation.

So, the concepts can be symbolically represented. This will facilitate

- (i) Better communication
- (ii) Training of managers
- (iii) Teaching of abstract concepts.

Here an attempt has been made to develop visual symbols for various terms associated with assets and liabilities which are commonly used in a business management situation.

The approach

Initially symbols for basic terms like assets, liabilities, land, money etc. are formed and other terms are derived as additions or modifications of these symbols.

Assets and Liabilities

Assets are defined as what we own. They are associated with growth and it is positive in nature. So different symbols associated with the above characters were tried out and finally an arrow pointing upwards which represents growth was selected.

Assets are classified as

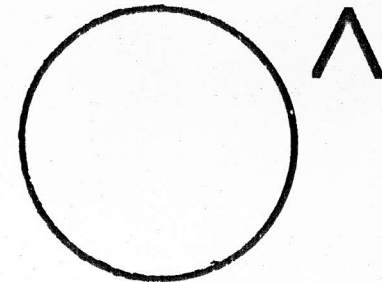
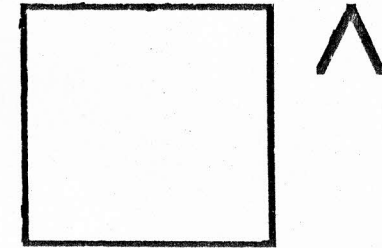
(i) fixed (ii) current (iii) intangible (iv) miscellaneous

Fixed Assets: These assets are not normally converted into cash. They are also not easily convertible. So it is static in nature. A square which is visually static is selected to represent this.

Current Assets: These assets can be easily realised into cash without much appreciable loss in value. So these assets are flowing in nature. A dynamic form, a circle is used to represent this.

Intangible Assets: These assets do not have any substance or physical body. So a dotted line is used to represent this. It is also not easily convertible and also depends upon the ability of the user to use it. Hence a square form is used again.

^ ASSET



Miscellaneous Assets: The assets that do not fall under any of the above categories are called as miscellaneous assets. So, a diamond which is different in orientation from other symbols is used.

Liabilities:

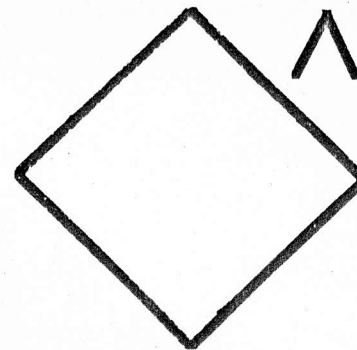
Liabilities are defined as what we owe. They are associated with decline, so an arrow pointing downwards is used as the symbol to represent liability. There are three kinds of liabilities.

(i) Current liabilities (ii) Term or fixed liabilities (iii) Net worth liabilities.

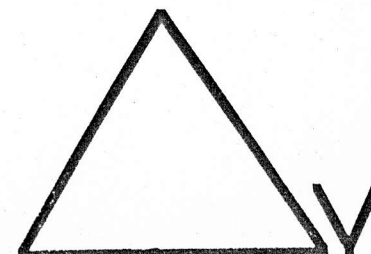
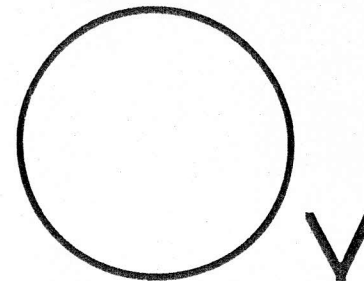
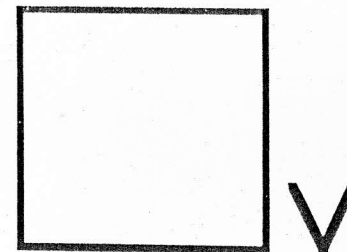
Current Liabilities: As again in the case of current assets, current liabilities are also represented by a dynamic form, a circle.

Term or Fixed liabilities: These liabilities are also represented similar to the fixed assets, but with the arrow pointing downwards. In both of the above symbols, the symbols for fixed, current and liability are added to give the necessary symbols.

Net worth: Net worth is comprised of capital surplus and reserve it is the base for a business and hence a triangle with a broad base is used to represent net worth.

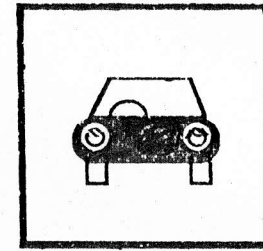


V LIABILITY

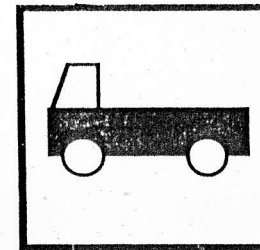


FIXED ASSETS:

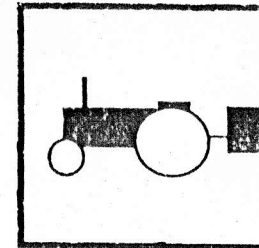
1. Automobiles: This includes trucks, tractors, trailers and so on. A general symbol for automobile is developed. This has a car within the symbol for fixed assets. This can be further classified into trucks, trailers etc. So in developing all these symbols, the respective pictograph is used instead of the car.



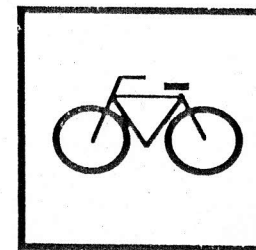
Trucks.



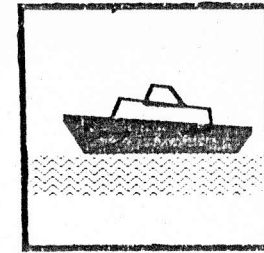
Tractors and Trailers.



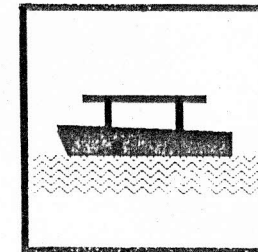
Bicycles: A pictograph of a bicycle is used.



Launches: A pictograph of a ship is used.



Barges: A pictograph of a ship is used.

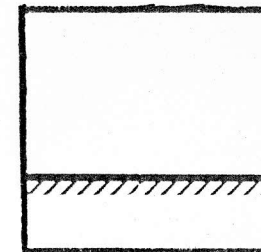


Similarly, different kinds of symbols can be developed.

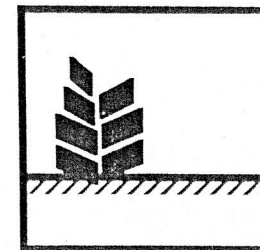
LAND

The land is represented by a line along with hatched lines, which is usually used to represent earth.

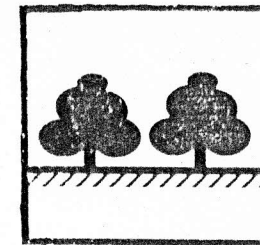
The land can be further divided into agricultural plantation etc.



Agricultural Land: A symbol of a crop is used along with the symbol of land to represent this.

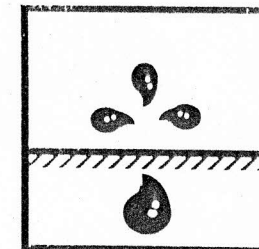


Plantation: Here a symbol of two trees are shown to show the plantation.



Oil Fields: This is represented by the symbol of land along with drops.

Likewise, different symbols for lands can be developed.

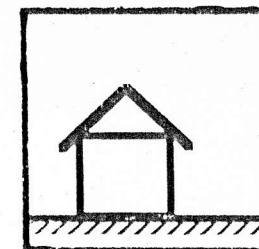


BUILDINGS

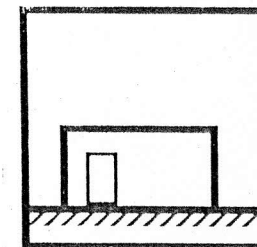
There are three types of buildings.

(i)residential (ii) commercial / office buildings
(iii) factory buildings or plants.

Residential buildings: It is shown by the form of a house. Initially it was thought that an image of a family can also be incorporated. Later, to reduce the complexity of the symbol, this was dropped.

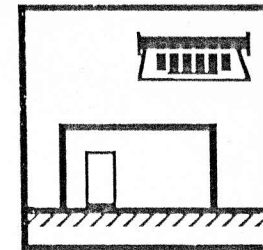


Commercial buildings: The shape of the building is a rectangle which is basically done this way to differentiate it from residential buildings.

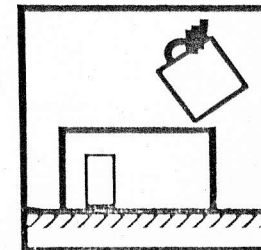


This can be further classified into offices, shops, hotels etc.

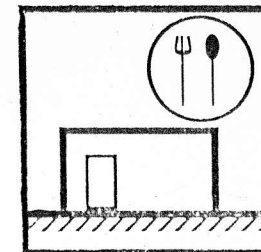
Office: An image of building along with a pictograph of a business machine is used. The most common business machine is a typewriter. Hence that image is used.



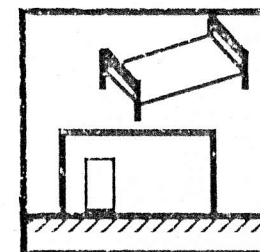
Shops: For a shop, a shopping bag or a wrapped pack is used to represent it.



Restaurant: For a restaurant, a plate with a spoon and a fork is used.



Hotel: Here, a cot is used to represent a hotel, since, a hotel is mainly considered as a place to stay in.

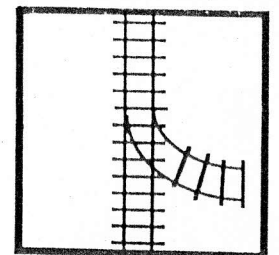
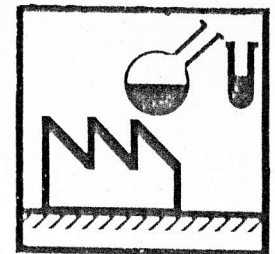
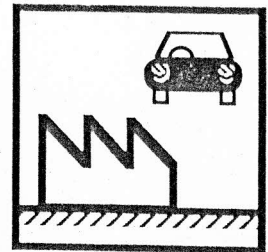
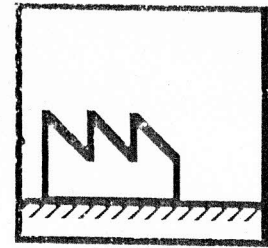


PLANTS

A plant is shown by the silhouette of a typical factory structure along with the image of land.

A plant can be further classified according to the kind of product it manufactures. For example an automobile plant is represented by an image of a car along with that of a plant. Similarly, a chemical plant is represented by a symbol of a factory along with a flask and a test tube.

Likewise, the symbols for different kinds of plants can be created.

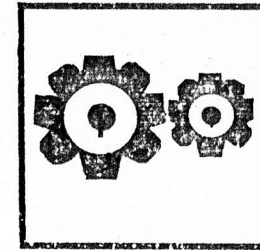


RAILWAY SIDINGS

A railway siding is a railway track owned by a firm. So here it is represented by two railway lines as shown in fig.

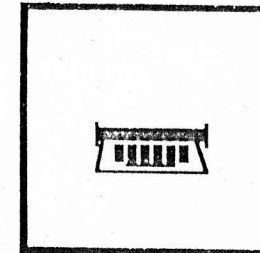
EQUIPMENT AND MACHINERY

Here two gears are used to represent machinery. Since selecting any particular machines image would limit the application of the symbol to a particular industry, a common symbol like this is selected.



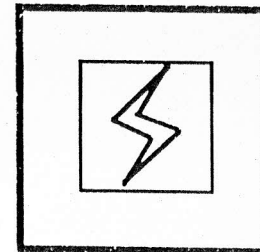
OFFICE EQUIPMENT

Of all the office equipments, the typewriter is most commonly seen. So, the pictograph of this is used.



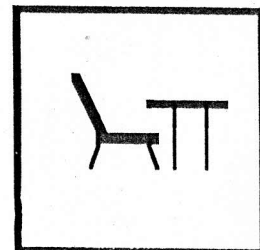
ELECTCRICAL INSTALLATION

This includes generators, transmission lines etc. So, instead of representing it with a pictograph, a sign like a lightning inside a square is used.



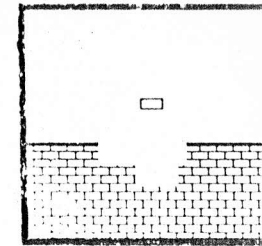
FURNITURE

Since, a table and a chair is the most common furniture that is used.



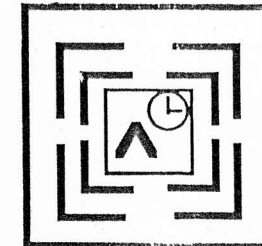
CAPITAL WORKS AWAITING COMPLETION:

Capital works usually involve fixed asset like buildings. A wall which is yet to be completed is hence selected as a symbol for this.



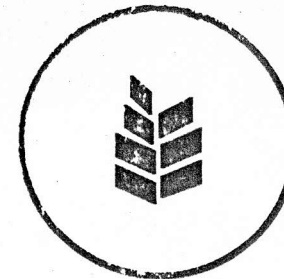
IMPROVEMENTS IN LEASEHOLD:

Usually, fixed assets only are taken on lease. So, a symbol for fixed asset is shown and its development is also shown by stylised arrows at corners.



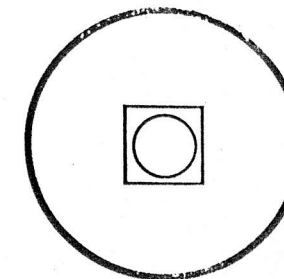
CURRENT ASSETS:

1. Standing Crops: A symbol of a crop is used along with that of the symbol of current assets.

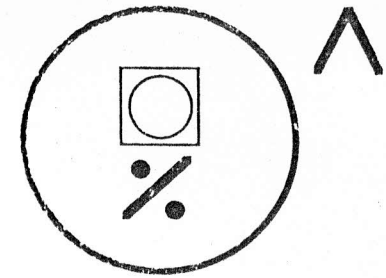


2. Deposits with banks: Initially, a basic symbol for money is developed. This is derived from the shape of a coin, which is a circle.

A deposit is shown as the money kept in a fixed place. So a square is used to represent the fixed nature.



3. Interest from banks: Interest is always calculated as a percentage of the deposit. So, a percentage symbol is used to represent the interest.

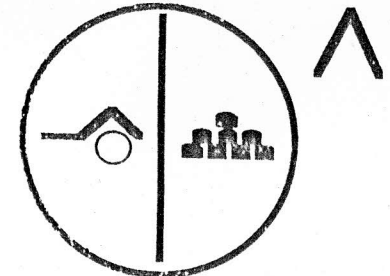


4. Advance payment: A payment is represented by a coin given by a hand.

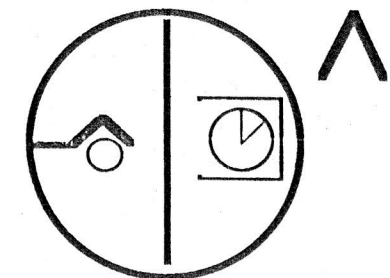
So, an advance payment is represented by putting this symbol before a line, the line representing the phase of time.



(i) Advance Payment for merchandise: Merchandise is represented by some material kept in an arranged way. Since, merchandise can be anything from stationery to finished goods, it is represented here in a general way.



(ii) Advance payment for income tax: An income is represented by money coming in. So, an "in" symbol is used with that of a coin and the tax is represented by showing a sector in the circle.



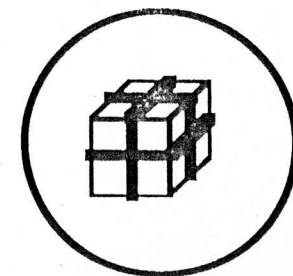
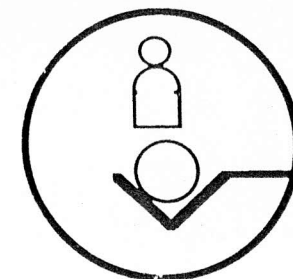
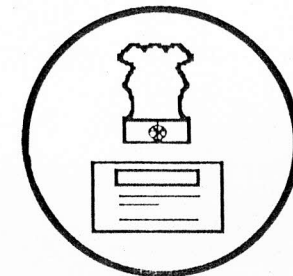
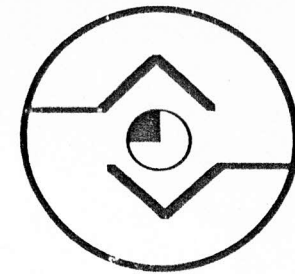
(iii) Quoted Debentures: Since debentures and shares represent a part of the capital of the company. it is also shown as a sector of a circle. To differentiate it from tax, this sector is darkened.

A quoted debenture is a sought after debenture. So, symbols of hands giving and receiving the debenture is used. Same can be used for marketable debentures. Only when a share is quoted it becomes marketable.

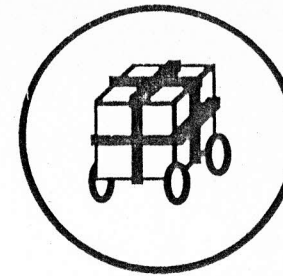
6. National Saving Certificate: Here, the government should be represented along with a certificate. Since, this symbol is used in our country only, the Indian Emblem is used along with the image of a document.

7. Accounts receivable from customers: Accounts is cash paid. So, accounts receivable is shown by a coin received by a hand. A customer is a common man, so a human figure is used.

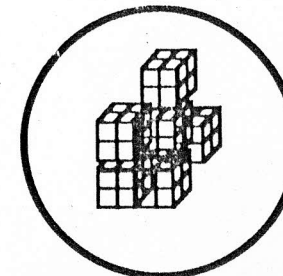
8. Finished goods: A finished good is characterised by its packing. So, a parcel/package is used to represent it.



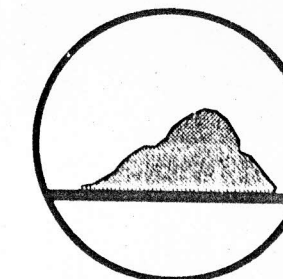
9. Goods in transit: Goods in movement is shown by adding wheels to the symbol for goods.



10. Goods on consignment: Consignments are bulk orders sent to the dealer under the company's responsibility. It is composed of a number of packets. So, it is used as a symbol for this.



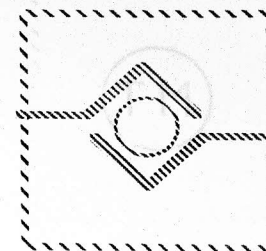
11. Raw material: It is a bulk of material in an unfinished stage. So, a pile is used to represent this.



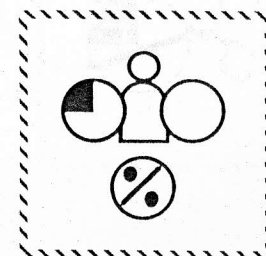
12. Work in progress: The symbol for capital works awaiting completion can be used for this also, since, the meanings are same.

INTANGIBLE ASSETS:

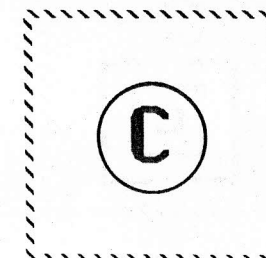
1. Bad debts: Any non collectable receivable is called as bad debt. They are existing still not within the reach of the company. So it is shown by a coin received and given by hands, which implies loan, in dotted lines.



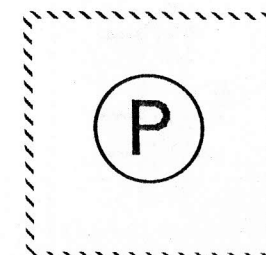
2. Brokerage paid: This is a commission for middle men. A middle man is represented by a human figure between the symbol of a share and a coin. This is because he helps in selling the share.



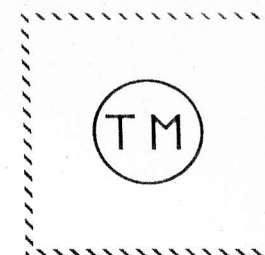
3. Copyrights: All copyrights are valuable only when it is used to generate cash. Hence the usual symbol of a c, used to represent copyright is used along with that of a symbol for money.



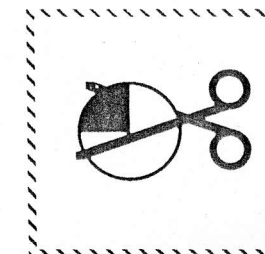
4. Patents: By the same logic as above, this symbol is also generated, except that a p is used to represent patents.



5. Trademarks: The letters 'TM' is used here.



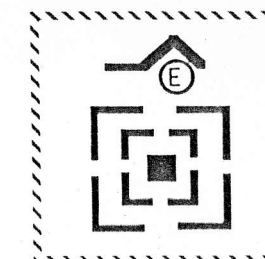
6. Debunture discount: Discount is cutting a part of the value. So, a scissors symbol is used along with that of a share.



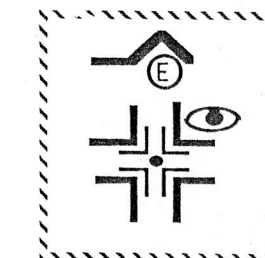
EXPENSES

Expense is shown by a hand giving money, since this symbol is used for also payments, the letter E is also used to represent expenses.

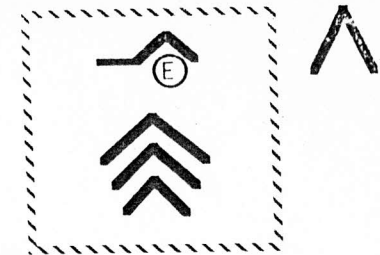
1. Development expense: Development is represented by arrows from four corners of a small central square, expanding on four sides.



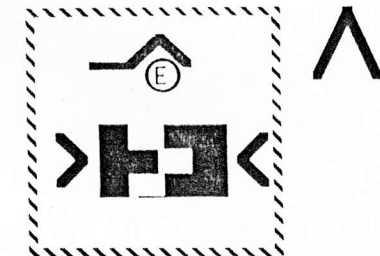
2. Experimental expenses: Experiment is represented by arrows narrowing down to a central dot and observation is represented by an eye.



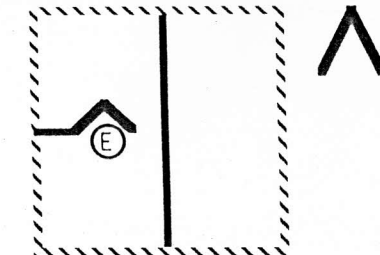
3. Formation expenses: Formation is represented by a growing form of an arrow pointing upwards. Since this represents growth and development.



4. Organisational expenses: Organisation is arranging things to make it complete. So two fragments which when joined, will form a rectangle is used. The act of organising is represented by two arrows, pushing the figures to join.



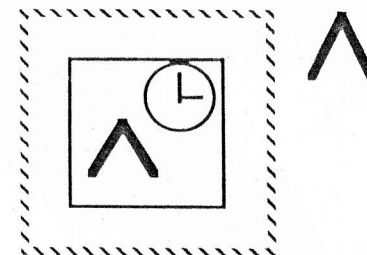
5. Preliminary expenses: Preliminary is before the actual expenses. Following the same logic like that of advance, the symbol for expense is also represented before a vertical line.



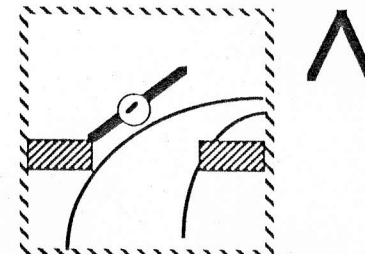
6. Goodwill: Goodwill is represented by a dove with leaves, which is universally accepted for peace and goodwill.



7. Leasehold: Only fixed assets like land, building are taken on lease. So, a fixed asset which is owned for a time period is represented by the symbol of fixed asset, along with a clock face.

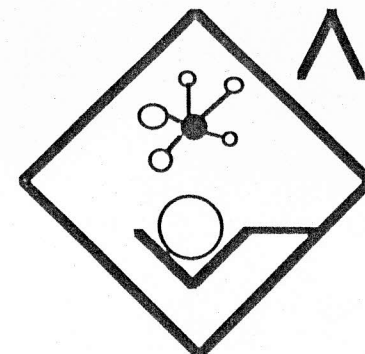


8. Licence: Licence is the permission to do. So a opening gate is used here.

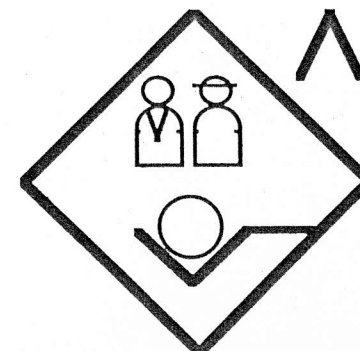


MISCELLANEOUS ASSETS:

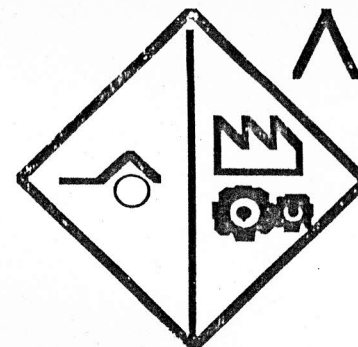
1. Accounts receivable from affiliates and subsidiaries: Affiliates and subsidiaries are represented by dots joined by lines showing their connection. The dots represent the companies.



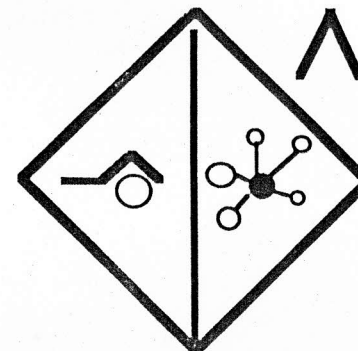
2. Accounts receivable from directors, officers and employees: A director is shown by a human figure with coat. An employee is shown by a human figure with a cap. So accounts receivable is shown by a hand receiving money along with the above symbols.



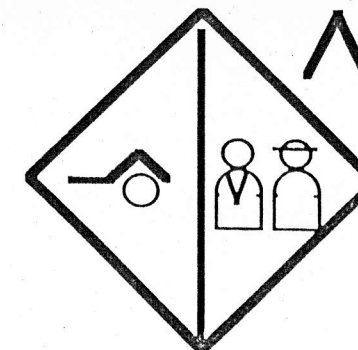
3. Advance for plant machinery: The symbols for plant and machinery is combined for this. The advance is shown as it was shown already.



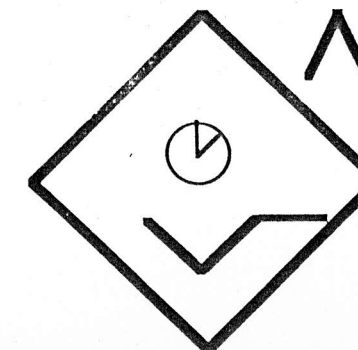
4. Advances for affiliates and subsidiaries: The symbols for affiliates and subsidiaries is used with that of advance.



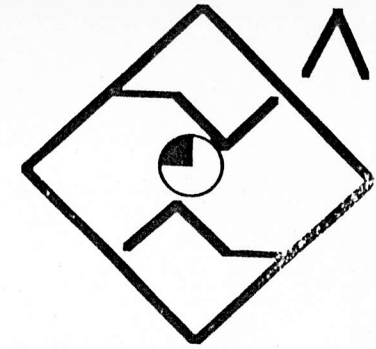
5. Advances for directors, employees: The symbols for directors and employees and advances are combined.



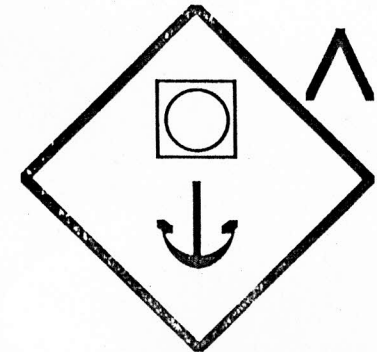
6. Refund of tax: The symbol for tax is used instead of symbol for coin and a receiving hand is used to get this symbol.



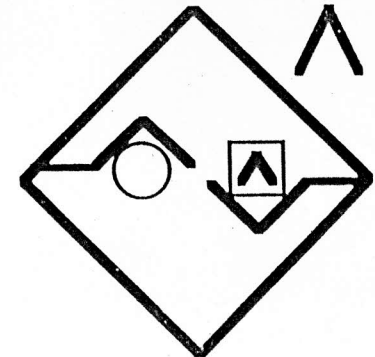
7. Unquoted debentures: The giving and receiving hands are shown in a reverse way to show that the shares and debentures are not sought after.



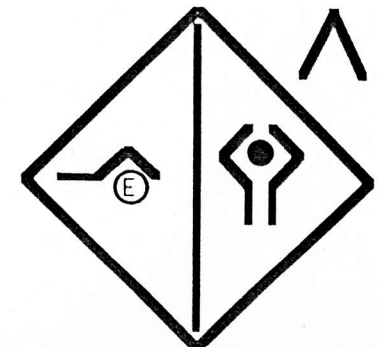
8. Deposits with customs and port trust: The symbol for deposit is used along with that of the symbol for port trust i.e. an anchor.



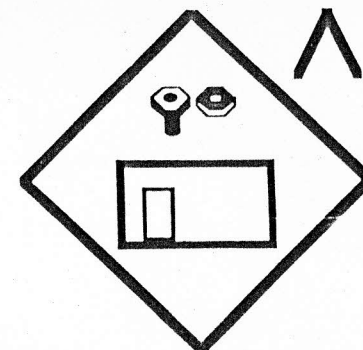
9. Mortgages receivable: A mortgage is represented by a hand giving a fixed asset in exchange for a coin given by another hand.



10. Prepaid expenses for insurances: Insurances represented by two hands safeguarding a dot, the dot being the company. The symbol for expenses is as used already.



11. Stores and spare parts: Spare parts is represented by the image of a nut and bolt and stores is shown by a building.

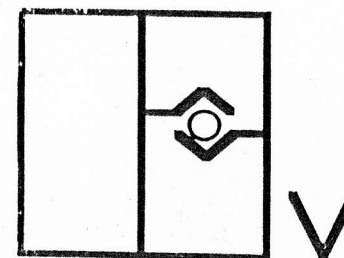


LIABILITIES:

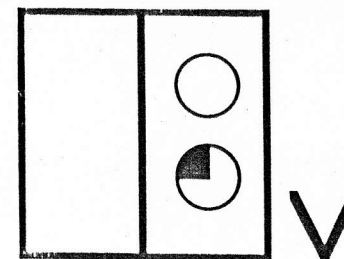
Fixed or Term liabilities:

1. Advances: Term loans maturing after one year.

Loans are represented by receiving and giving hands with a coin. The loan matures after one year. So, the symbol is drawn after a line which divides the square into two halves. The line representing the phase of time, which is one year.

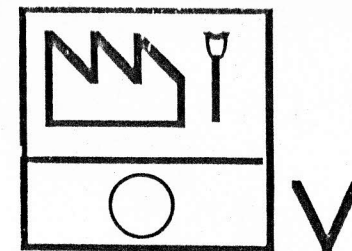


2. Debenture amount maturing after one year: The debenture is represented by a sector of a circle as before and the amount is represented by a coin.

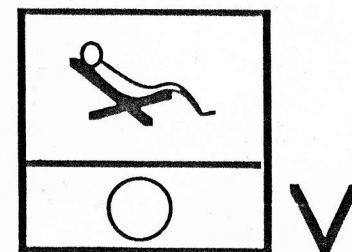


3. Reserves: Reserves are the amount kept separately to meet some specific expenses. So, the reserve is expressed here by a circle below a line.

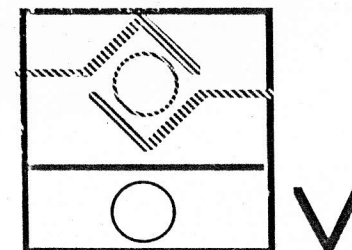
(i) Plant rehabilitation reserves: The plant rehabilitation is represented by a symbol of a plant along with an image of a crutch to indicate rehabilitation.



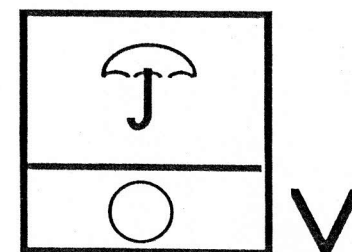
(ii) Reserves for pension and gratuity: The pension and gratuity are for retired persons. So, here it is represented by the image of a human figure resting on a reclining chair.



(iii) Reserves for bad debts: The symbol of bad debts and reserves are combined to give this symbol.



(iv) Reserves to cover possible loss: This amount is meant for giving protection. So, the image of an umbrella is used to represent the protection.



Current Liabilities:

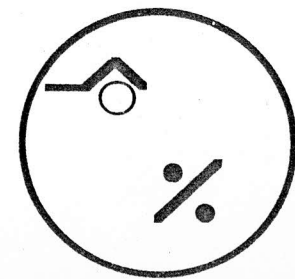
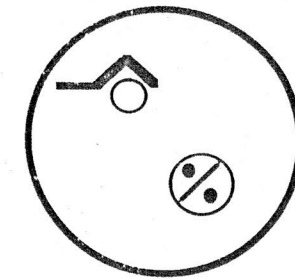
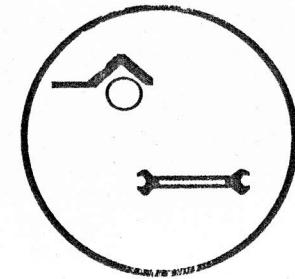
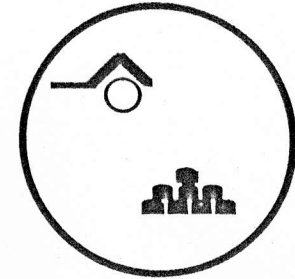
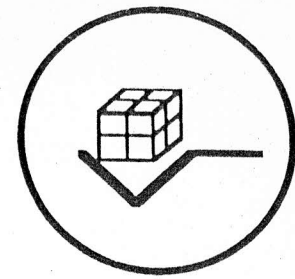
1. Acceptances: Acceptances have different meanings in different context, but in business it is usually referred to the consignment accepted by a company. So, here the symbol is developed in the sense that it is a received good.

2. Accounts payable for merchandise: Accounts payable is represented by a hand giving cash, because, it usually indicates the payment made. The merchandise is shown by a symbol as used before. 3. Accounts payable for services: Though services not only mean repairing services, it is the most commonly associated service. So, a spanner is used to represent services.

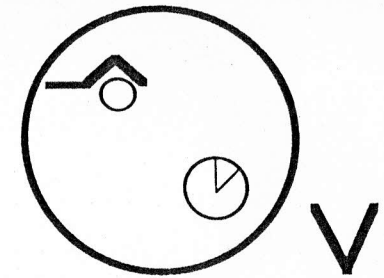
4. Accrued expenses:

(i) Commision: Commision is usually calculated as a percentage of the money transacted. So, a percentage symbol within a circle is used. The expenses is represented as before.

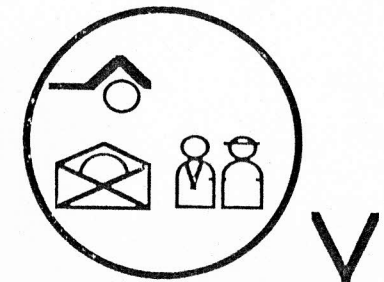
(ii) Interest: The symbols for expenses and interest are combined to give this symbol.



(iii) Taxes: Again, the symbol for expenses and taxes are combined to give the symbol.

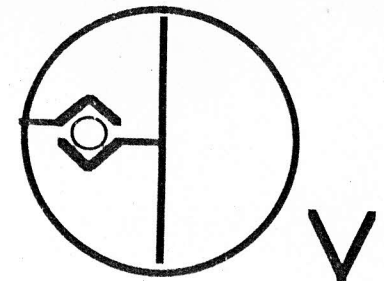


(iv) Salaries: Here the circle which represents money is combined with that of the symbol of a cover to indicate salary. The symbols for employees and officers are used as before.

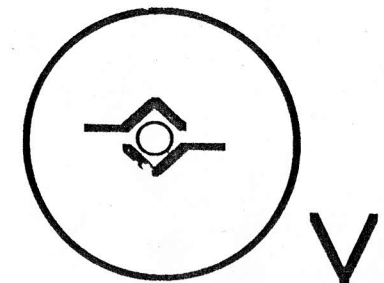


5. Advances:

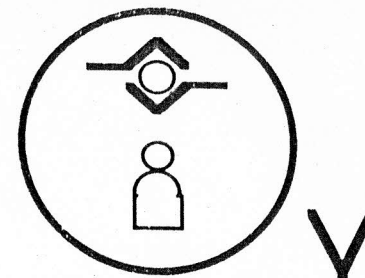
(i) Amount maturing within a year: Since amount maturing after a year was represented by the symbol of loan, after the vertical line, here it is used before the line.



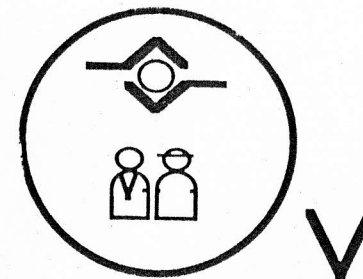
(ii) Amount with no maturity date: Since here time is not taken into account, the vertical line is not used.



(iii) Advances from customers: The customer is represented by a human figure. This figure is different from those used for employees and officers. The symbols for advances is combined with this to give the symbol.

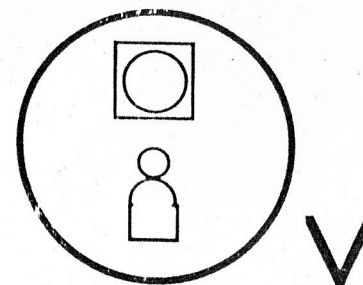


(iv) Advances from directors and employees: The symbols for directors and employees and advances are used in conjunction to generate this symbols.

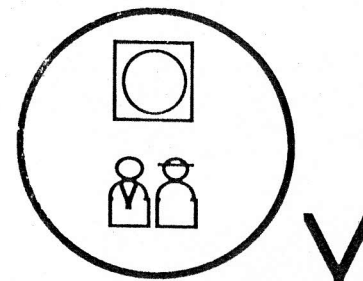


6. Deposits:

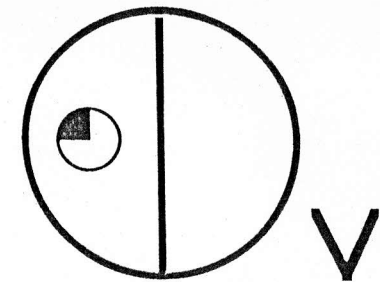
(i) Customers deposit: A combination of the symbols for customers and deposits is used.



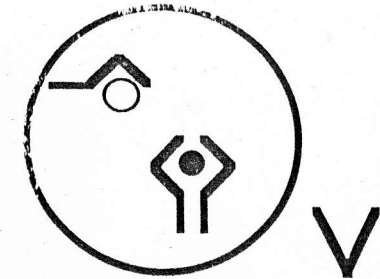
(ii) Deposits from employees and officers: The respective symbols are added to get this symbol.



7. Debuntures maturing within one year: The symbol for debuntures is put before the vertical line to represent that it matures before one year.

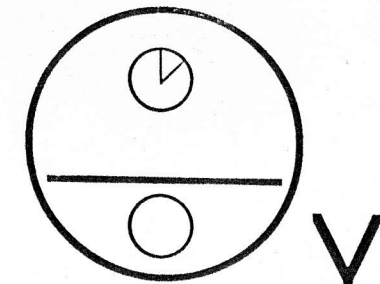


8. Insurance premium payable: The symbols for insurance and payment are used for the symbol.

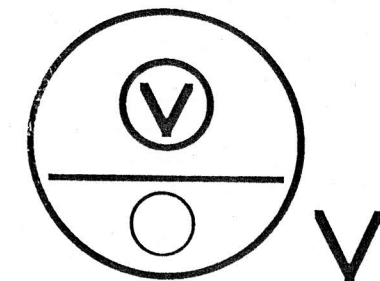


9. Reserves:

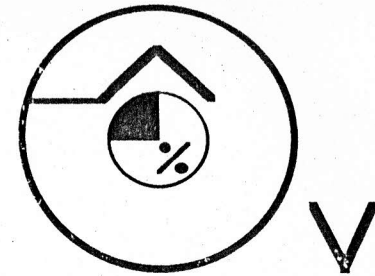
(i) Reverves for taxation: The symbols for tax and reserves are used in conjunction.



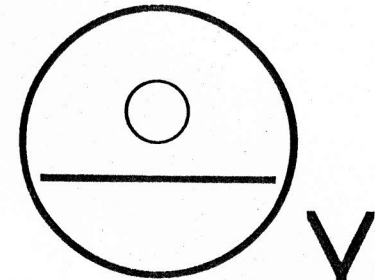
(ii) Reserves for accrued liability: The symbols for liability and reserves are used together for this symbol.



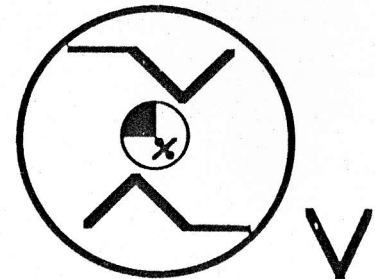
10. Dividends payable: The dividends are calculated as a percentage of the shares held. So the percentage symbol with in that of the shares to represent this.



11. Surplus reserves: Surplus is amount in excess. Hence, the symbol for money is put above a horizontal line.



12. Unclaimed dividend: Since the dividend is not sought for, the giving and receiving hands are put in the reverse way.



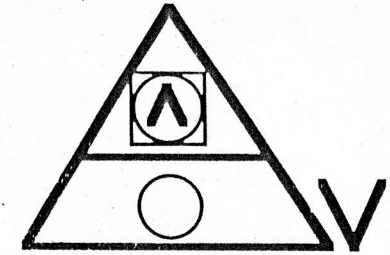
Net Worth

Capital is foundation for the business and it includes fixed assets like buildings and current assets like shares, depending upon the business. So capital is represented by the combination of symbols for fixed and current assets.

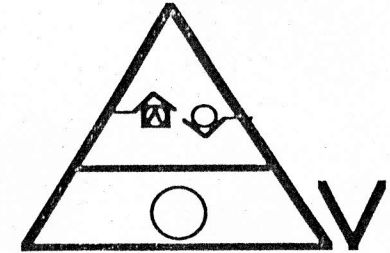


CAPITAL

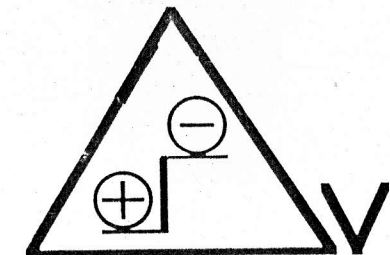
1. Capital reserve: The symbols of capital and reserve are used together to represent this.



2. Capital redemption reserve: Redemption is the retrieval of mortgage. So the mortgage symbol is used but with the hand giving the money in return for capital.



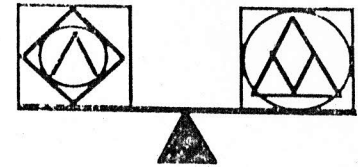
3. Capital and loss account: Difference between profit and loss is shown here. Since this is a liability, the loss is put at a higher level than that of the profit.



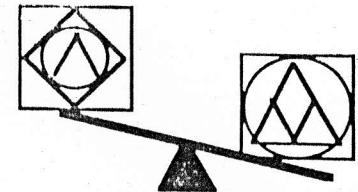
RATIOS:

The ratios are the comparison of two different factors. Depending upon the predominant factor, the ratio becomes positive or negative. So, the two factors are represented on the ends of a horizontal line over a triangle. This symbol representing a balance.

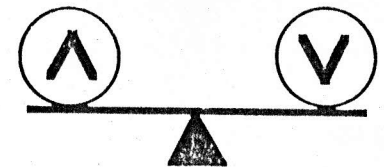
1. Solvency ratio: This is the ratio between tangible networth and liabilities. The tangible networth is the addition of current, fixed and miscellaneous assets. The liability is represented by the combination of symbols for current, fixed and networth liabilities.



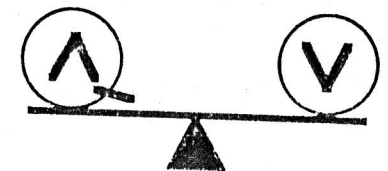
(i) Insolvency: When the company is not able to honor its liabilities, insolvency results. Here, the liabilities are more than the assets. This is represented by the symbol for liabilities is at a lower level than that of the symbol for total assets.



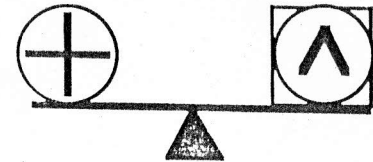
2. Current ratio: This is the ratio between current assets and current liabilities. Hence, a combination of the respective symbols is used.



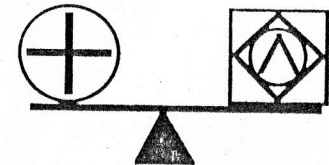
3. Quick ratio: It is the ratio between quick assets and current liabilities. So the current asset symbol is represented with a Q instead of a circle.



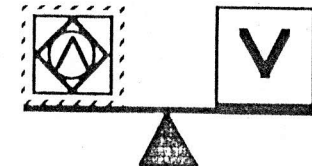
4. Return on total capital: Ratio between total capital and net profit. The symbols of ratio, profit and capital are mixed to get this symbol.



5. Return on tangible networkth: This is the ratio between profit and tangible networkth. Again, a superposition of the respective symbols are used.



6. Debt-Equity ratio: Ratio between shareholders funds and term or fixed liabilities.



The shareholders' funds includes all assets. So the symbol for intangible asset is also used in combination with the symbol for networkth.

CONCLUSION

In this project an attempt was made to evolve symbols for various terms involved in business management. These symbols are expected to reduce the monotony of the voluminous annual reports.

Some symbols were dealt with elaborately, whereas, in some others the generation of symbol was quite difficult due to the broad scope of terms.

The symbols can contribute very much to the understanding of different difficult concepts. To understand the concepts easily, the way in which the symbol has been derived will be explained. From this, the various factors involved in the term and their contribution will become clear. This can be done by bringing out small booklets explaining basic symbols terms and symbols and the derivations of the complex symbols from them.

This will also be useful in educating the user about the terms. The users include stockmarket people, managers and students. The symbols shall initially be used along with the verbal expressions which will lead to gradual acceptance in future.

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