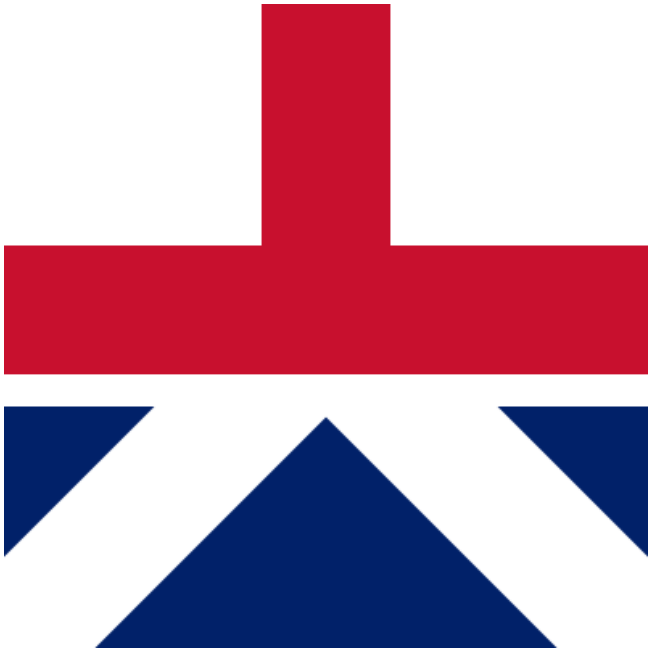


Oned
Standtogether
Electronic
Reconers

Orbewrit

Reichstandortsgemeinschaft – Rsg
Reichsforschungsgemeinschaft für Rechenwissenschaft und -lehre – Rfg-r
British Forseec Fellowship for Recon- and Telllore
Norræn Rannsóknar Samfélag
© 1989-1993

Left under the Mean Need Leave.

© 1993-

Left under the Mean Need and Spread Leave.

Inhold

Infare

The OSER is a layout for standtogethers meant to eath the reconing and trade of onputs. An OSER standtogether is made up of a **main hold**, one or more **reconing onelings** and naught or more **linced onelings**.

In the OSER, reconings and trades are bewrit through **broocs**. When a brooc is run, three steps happen:

- grasp;
- underbreac; and
- framing.

Grasp

In a grasp, an **onput** is overdragged between a oneling and the main hold.

Underbreac

In an underbreac, a oneling maces a linced oneling run a new brooc.

Framing

In framing, a reconing oneling runs a brooc.

Part I

Grasp

Cutup 1

Main Hold

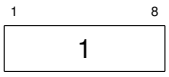
The main hold is made of **cells**.

Telllingstrings

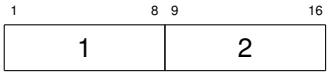
The cells hold **telllingstrings**. In a tellingstring, the telllings are tallied from 1 and are worth either 0 or 1. A string which is made of *n* telllings is called an ***n*-string**.

Each cell in the main hold holds an only 8-string. To hold a string which is longer than an 8-string, it is cut into 8-strings and the 8-strings are held in following cells.

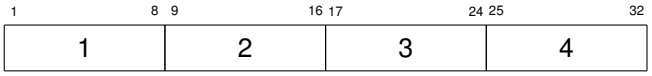
8-String



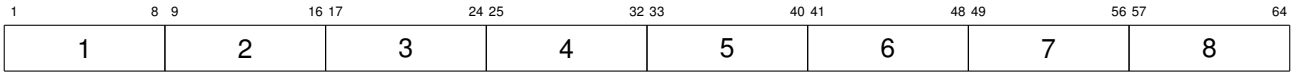
16-String



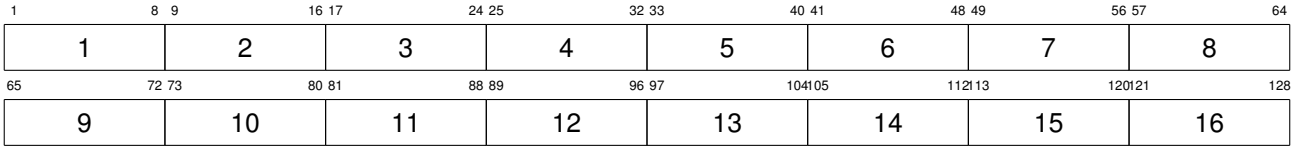
32-String



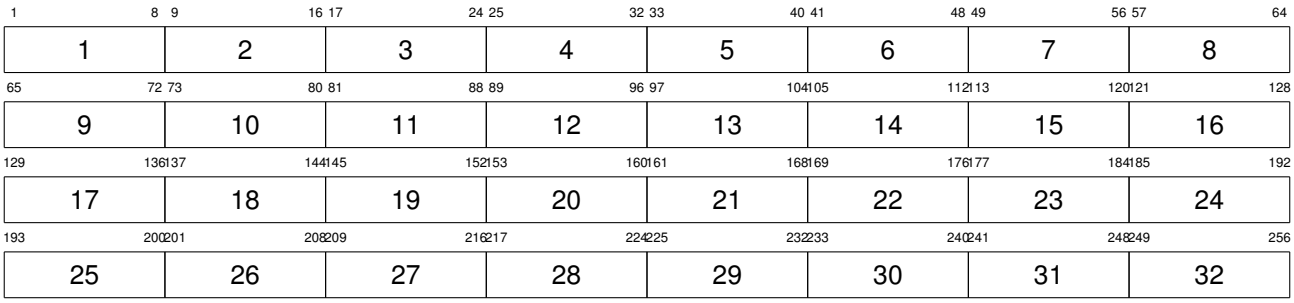
64-String



128-String



256-String



Onwrits

Each cell is marced out by a whole tale called an **onwrit**. A telllingstring which is bigger than an 8-string is marced out by the onwrit of its first 8-string.

Each onwrit is a **true onwrit** or a **craft onwrit**.

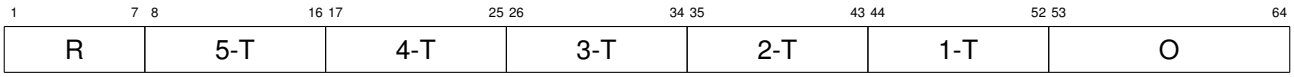
True Onwrit

A true onwrit marcs out a lone cell in the main hold. Onwrit 0 marcs out the first cell, and following onwrits marc out following cells.

Craft Onwrit

A craft onwrit has a few shapes.

1st Ring Shape



R Root Tale

5-T 5th Ring Field Tale

4-T 4th Ring Field Tale

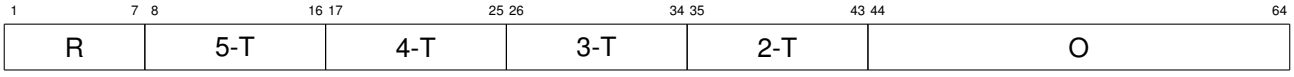
3-T 3rd Ring Field Tale

2-T 2nd Ring Field Tale

1-T 1st Ring Field Tale

O Offset

2nd Ring Shape



R Root Tale

5-T 5th Ring Field Tale

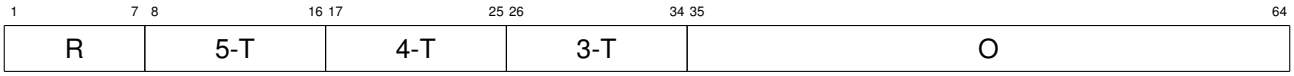
4-T 4th Ring Field Tale

3-T 3rd Ring Field Tale

2-T 2nd Ring Field Tale

O Offset

3rd Ring Shape



R Root Tale

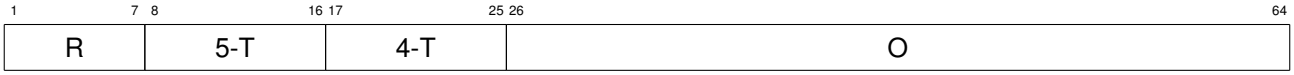
5-T 5th Ring Field Tale

4-T 4th Ring Field Tale

3-T 3rd Ring Field Tale

O Offset

4th Ring Shape



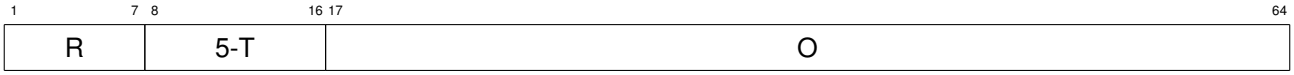
R Root Tale

5-T 5th Ring Field Tale

4-T 4th Ring Field Tale

O Offset

5th Ring Shape

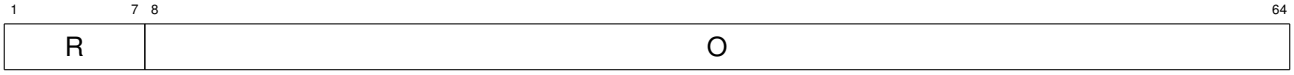


R Root Tale

5-T 5th Ring Field Tale

O Offset

6th Ring Shape



R Root Tale

O Offset

Cutup 2

Onelings

A oneling grasps the main hold when a telllingstring is overdragged between this oneling and marced out cells.

1. The oneling puts out the true onwrit of the first of the marced out cells in the main hold.
2. The telllingstring is overdragged between the oneling and the marced out cells in the main hold.

True Onwrit

When a telllingstring in the main hold is marced out, all of its 8-strings are also marced out.

Overdrag

The grasp is either a **read** or a **write**, hingging on the overdrag's way.

Read

The grasp is a read when the string is sent from the oneling to the main hold.

Write

The grasp is a write when the string is sent from the main hold to the oneling.

Grasp Timelayout

For every oneling and for every main hold cell, a read from the cell by the oneling will overdrag the worth overdragged by the last write to that same cell by that same oneling.

Craft Onwrit

A craft onwrit is overset into a true onwrit.

Frame Field

The **frame field** holds the onputs for oversetting.

Root Field

A root field holds 6th ring frame bewrits, 6th ring frame ceys or 5th ring frame field bewrits.

6th Ring Frame Bewrit

1 7	8 57	58	59	60	61	62	63	64
T	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	E	S	1	W	R	F	0

- T Frame Teacher
- E Wended
- S Swapped
- W Write Leave
- R Read Leave
- F Frame Leave

6th Ring Frame Cey

1 59	60	61	62	63	64
T	0	W	R	F	1

- T Gate Teacher
- W Write Leave
- R Read Leave
- F Frame Leave

5th Ring Frame Field Bewrit

1 52	53 64
T	0 0 0 0 1 0 0 0 0 0 0 0

- T Field Teacher

6th Ring Frame Gate

A 6th ring frame gate is taught to by a 6th ring frame cey.

1 7	8 57	58	59	60 64
T	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1	E	S	0 0 0 0 0

- T Frame Teacher
- E Wended
- S Swapped

5th Ring Frame Field

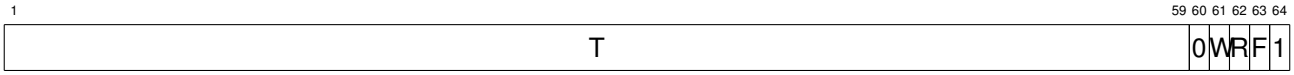
A 5th ring field holds 5th ring frame bewrits, 5th ring frame ceys or 4th ring frame field bewrits.

5th ring frame bewrit

1 16	17 57	58	59	60	61	62	63	64
T	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	E	S	1	W	R	F	0

- T Frame Teacher
- E Wended
- S Swapped
- W Write Leave
- R Read Leave
- F Frame Leave

5th Ring Frame Cey



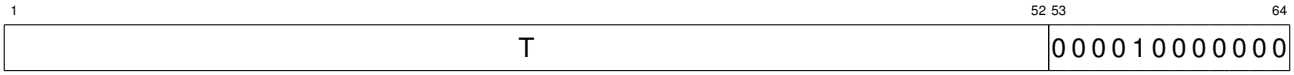
T Gate Teacher

W Write Leave

R Read Leave

F Frame Leave

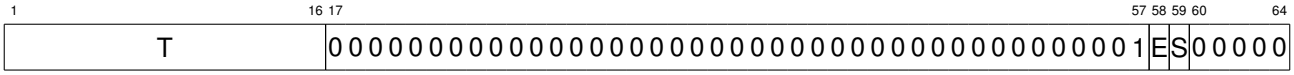
4th Ring Frame Field Bewrit



T Field Teacher

5th Ring Frame Gate

A 5th ring frame gate is taught to by a 5th ring frame cey.



T Frame Teacher

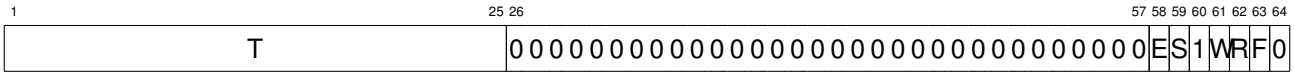
E Wended

S Swapped

4th Ring Frame Field

A 4th ring field holds 4th ring frame bewrits, 4th ring frame ceys or 3rd ring frame field bewrits.

4th Ring Frame Bewrit



T Frame Teacher

E Wended

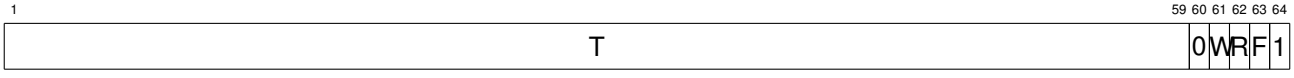
S Swapped

W Write Leave

R Read Leave

F Frame Leave

4th Ring Frame Cey



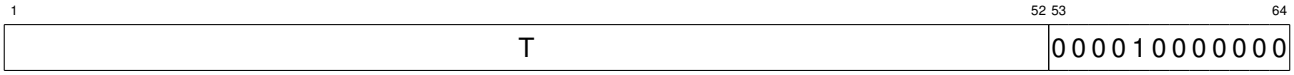
T Gate Teacher

W Write Leave

R Read Leave

F Frame Leave

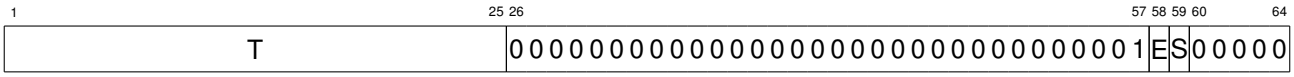
3rd Ring Frame Field Bewrit



T Field Teacher

4th Ring Frame Gate

A 4th ring frame gate is taught to by a 4th ring frame cey.



T Frame Teacher

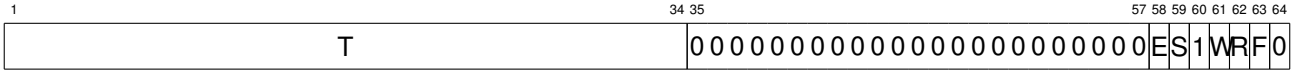
E Wended

S Swapped

3rd Ring Frame Field

A 3rd ring field holds 3rd ring frame bewrits, 3rd ring frame ceys or 2nd ring frame field bewrits.

3rd Ring Frame Bewrit



T Frame Teacher

E Wended

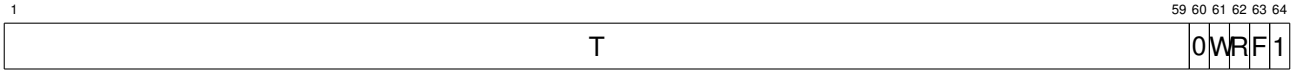
S Swapped

W Write Leave

R Read Leave

F Frame Leave

3rd Ring Frame Cey



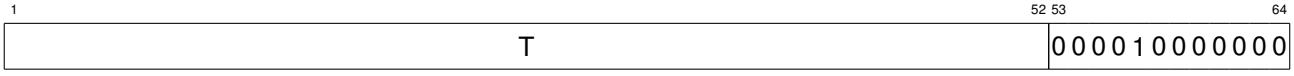
T Gate Teacher

W Write Leave

R Read Leave

F Frame Leave

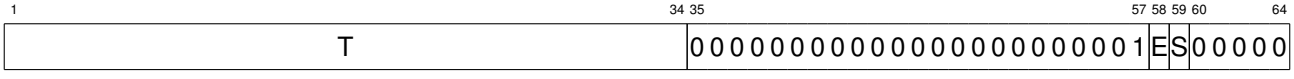
2nd Ring Frame Field Bewrit



T Field Teacher

3rd Ring Frame Gate

A 3rd ring frame gate is taught to by a 3rd ring frame cey.



T Frame Teacher

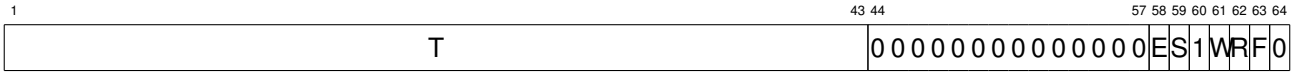
E Wended

S Swapped

2nd Ring Frame Field

A 2nd ring frame field holds 2nd ring frame bewrits, 2nd ring frame ceys or 1st ring frame field bewrits.

2nd Ring Frame Bewrit



T Frame Teacher

E Wended

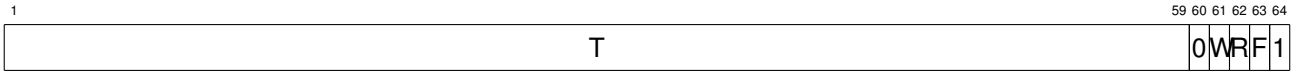
S Swapped

W Write Leave

R Read Leave

F Frame Leave

2nd Ring Frame Cey



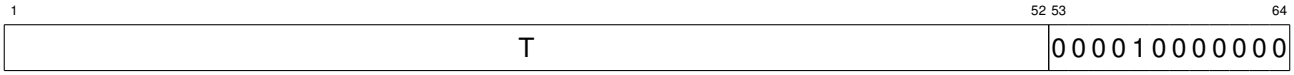
T Gate Teacher

W Write Leave

R Read Leave

F Frame Leave

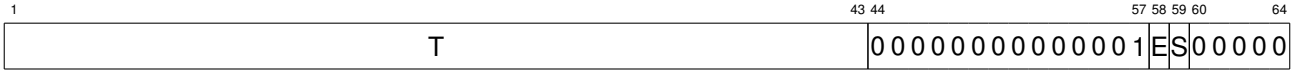
1st Ring Frame Field Bewrit



T Field Teacher

2nd Ring Frame Gate

A 2nd ring frame gate is taught to by a 2nd ring frame cey.



T Frame Teacher

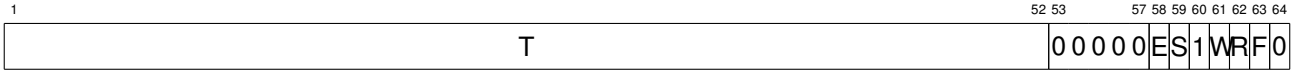
E Wended

S Swapped

1st Ring Frame Field

A 1st ring frame field holds 1st ring frame bewrits or 1st ring frame ceys.

1st Ring Frame Bewrit



T Frame Teacher

E Wended

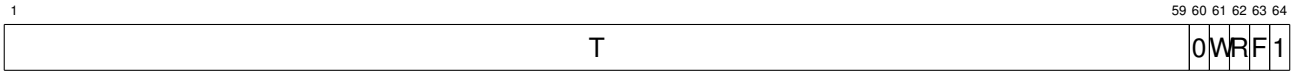
S Swapped

W Write Leave

R Read Leave

F Frame Leave

1st Ring Frame Cey



T Gate Teacher

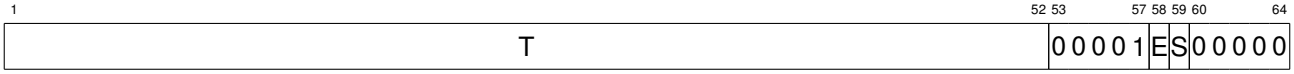
W Write Leave

R Read Leave

F Frame Leave

1st Ring Frame Gate

A 1st ring frame gate is taught to by a 1st ring frame cey.



T Frame Teacher

E Wended

S Swapped

Runup

The oversetting runs in two steps.

Frame Field Walc

The frame field walc gives either a frame cey or a frame bewrit from a craft onwrit.

1. The oneling reads from the root field the dragin which the root tale marcs.
2. If the dragin has none of the forbewritten shapes, then the fall **ZEE** happens.

   Otherwise, if the dragin is either a 6th ring frame cey or a 6th ring frame bewrit, then the oneling undertaces the 6th ring frame grasp with the dragin.

   Otherwise, the oneling reads from the 5th ring frame field the dragin which the 5th ring field tale marcs.
3. If the dragin has none of the forbewritten shapes, then the fall **ZEE** happens.

   Otherwise, if the dragin is either a 5th ring frame cey or a 5th ring frame bewrit, then the oneling undertaces the 5th ring frame grasp with the dragin.

   Otherwise, the oneling reads from the 4th ring frame field the dragin which the 4th ring field tale marcs.
4. If the dragin has none of the forbewritten shapes, then the fall **ZEE** happens.

   Otherwise, if the dragin is either a 4th ring frame cey or a 4th ring frame bewrit, then the oneling undertaces the 4th ring frame grasp with the dragin.

   Otherwise, the oneling reads from the 3rd ring frame field the dragin which the 3rd ring field tale marcs.
5. If the dragin has none of the forbewritten shapes, then the fall **ZEE** happens.

   Otherwise, if the dragin is either a 3rd ring frame cey or a 3rd ring frame bewrit, then the oneling undertaces the 3rd ring frame grasp with the dragin.

   Otherwise, the oneling reads from the 2nd ring frame field the dragin which the 2nd ring field tale marcs.

6. If the dragin has none of the forbewritten shapes, then the fall **ZEE** happens.

   Otherwise, if the dragin is either a 2nd ring frame cey or a 2nd ring frame bewrit, then the oneling undertaces the 2nd ring frame grasp with the dragin.

   Otherwise, the oneling reads from the 1st ring frame field the dragin which the 1st ring field tale marcs.

7. If the dragin has none of the forbewritten shapes, then the fall **ZEE** happens.

   Otherwise, the oneling undertaces the 1st ring frame grasp with the dragin.

*n*th Ring Frame Grasp

The *n*th ring frame grasp gives a true onwrit needed in step 1 of the main hold grasp from an *n*th ring frame cey or an *n*th ring frame bewrit.

1. If the dragin does not allow the grasp, then the fall **ZZE** happens.

   The dragin allows the grasp if one and only one of the following is met.

   - The grasp is a write and the W-tellling is 1.
   - The grasp is a read and the R-tellling is 1.
   - The grasp is a read of a bid (as bewritten in step (1) of the bid loop) and the F-tellling is 1.
   - The grasp is a read of a root field bewrit (as bewritten with bid BRS) and all 3 telllings are 0.

2. If the dragin is a cey, then the oneling reads the gate to which the cey's gate teacher teaches.
3. If the S-tellling is 1, then the fall **ZSW** happens.
4. If the grasp is a write, then the oneling sets the E-tellling of the dragin in the main hold to 1.
5. The oneling gives the offset to the frame teacher to give the true onwrit.

Part II

Underbreac

Cutup 3

Onbuilds

In an underbreac, onputs are traded between onelings.

Sinc

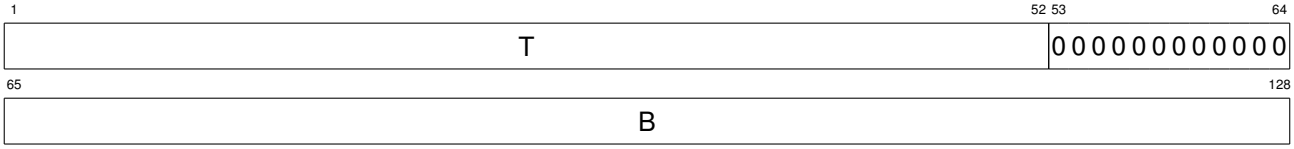
Each linced oneling is a sinc.

Gate

An undebreac gate is a cell in the main hold which is bound to a sinc.

Dragin

An underbreac dragin holds a craft onwrit to an onput and a teacher to the root field with which the onwrit must be overset.



T Root Field Teacher

B Onput Craft Onwrit

Well

A well is a oneling which starts an underbreac.

Cutup 4

Runup

An underbreac happens when the well writes an underbreac dragin to the sinc's underbreac gate.

1. The well writes the dragin to the sinc's gate.
2. The sinc oversets the dragin's craft onwrit with the root field taught to by the dragin's root field teacher.
3. The sinc forworcs the onputs taught to by the aforegiven true onwrit.

Part III

Framing

Cutup 5

Drive

In the OSER, reconing onelings follow a fast drive.

Bid Loop

A reconing oneling follows the *bid loop*.

1. The oneling reads a bid.
2. If the bid is not cnown, then the fall **AEA** happens.
3. The oneling frames all grasps which the bid hingges on.

Falls

When a fall happens, the oneling runs a **trap**.

A trap is a sunder brooc which gets the oneling's stand at the time of the fall as input.

Cutup 6

Reconing Onelings

In the OSER, the reconing onelings are built to a bespocen layout.

Near Hold

The near hold does not hingg on the main hold.

0-15 – Onputs

1	64
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	

BT – Bid Teacher

1	63	64
T		S

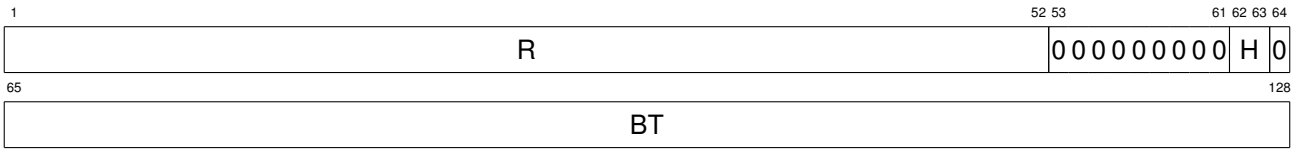
T Teacher

S Stand

0 Running

1 Stopped

SD – Stand Dragin



R Root Field Teacher

H Hingg

BT Bid Teacher

Onputs

An onput can be either a fast bystrice tale or a floating bystrice tale.

Fast Bystrice Tales

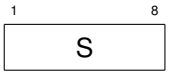
Let $Z_U(S, M)$ be the tale bewritten by a telllingstring S with lowest might M in an unsigned meaning.

$$Z_U(S, M) = 2^M \sum_{i=1}^{|S|} 2^{|S|-i} S_i$$

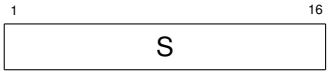
Let $Z_Z(S, M)$ be the tale bewritten by a telllingstring S with lowest might M in a signed meaning.

$$Z_Z(S, M) = 2^M \left(-2^{|S|-1} S_1 + \sum_{i=2}^{|S|} 2^{|S|-i} S_i \right)$$

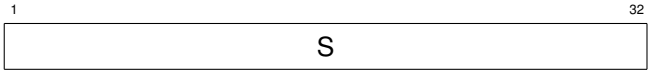
U/Z1



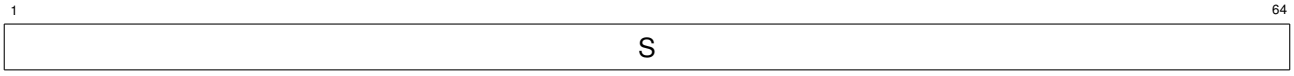
U/Z2



U/Z4



U/Z8

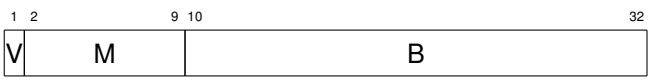


Floating Bystrice Tales

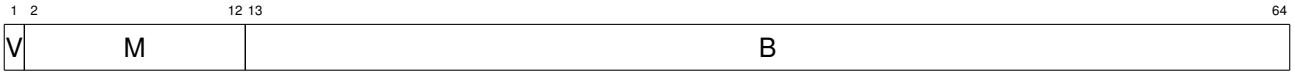
Let $X(V, M, B)$ be the tale bewritten by a sign tellling V, a might telllingstring M and a cut telllingstring B.

$$X(V, M, B) = (-1)^V 2^{Z_U(M,0)-2^{|M|-1}} Z_U(B, -1 - |B|)$$

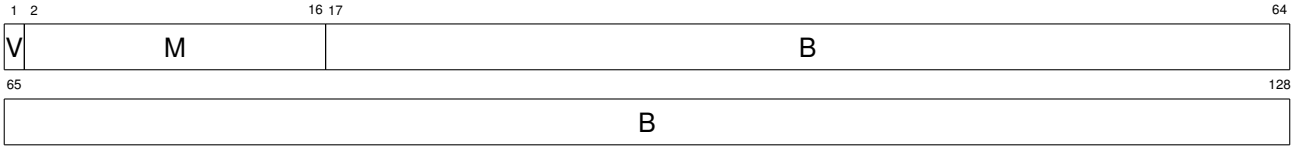
X4



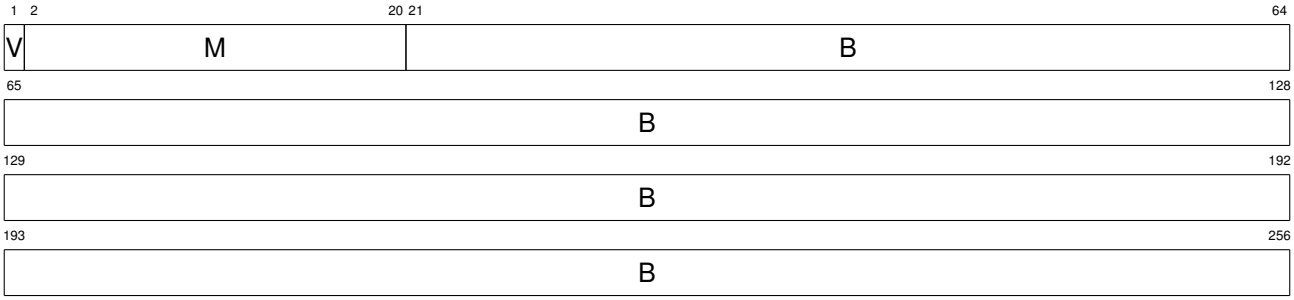
X8



X16



X32



Bids

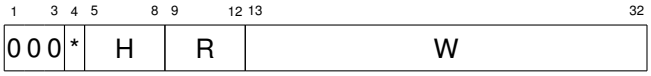
A bid bewrites a wend in the brooc's stand. Each bid has **shapes**.

Steer Bid

A steer bid wends the run of the brooc when its hingg is fulfilled. Each tellling of the bid fall marcs a worth of the SD-hingg, and the bid hingg is fulfilled if the SD-hingg has the worth whose tellling in the bid's hingg is 1.

A steer bid has three shapes.

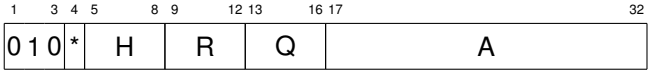
Fast Shape



In this shape:

- the sinc is near hold cell *R*;
- the well is *W*.

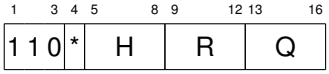
Main Hold Shape



In this shape:

- the sinc is near hold cell *R*;
- the well is the main hold cell which is marced by the tally of *A* and near hold cell *Q*.

Near Hold Shape



In this shape, the sinc and well are near hold cells *R* and *Q*.

SCI – Scip

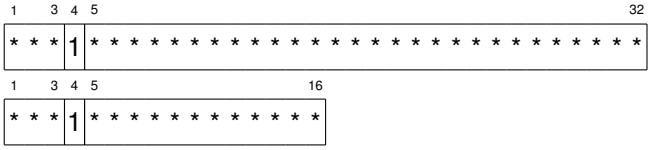
After this bid:

- *BT* is set to the tale of *BT* and the well;
- the sinc is set to *BT* before the bid.

JMP – Jump

After this bid:

- *BT* is set to the well;
- the sinc is set to *BT* before the bid.



Stir Bid

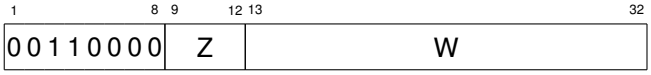
A stir bid bewrites a stirring of onputs between the main hold and the near hold.

STR – Stir

After this bid, the sinc is set to the well.

This bid has four shapes.

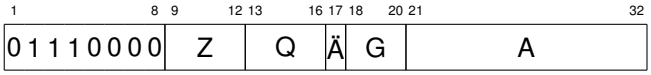
Fast Shape



In this shape:

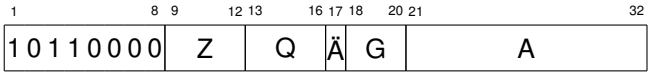
- the sinc is near hold cell *Z*;
- the well is *W*.

Main Hold Shape



In this shape:

- the sinc is near hold cell *Z*;
- if the Ä-tellling is 0, then the well is the main hold cell which the tale of *A* and near hold cell *Q* marcs; otherwise:
  - the well is the main hold cell which near hold cell *Q* marcs;
  - *A* is given to near hold cell *Q* after the bid.

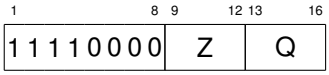


In this shape:

- if the Ä-tellling is 0, then the sinc is the main hold cell which the tale of *A* and near hold cell *Z* marcs; otherwise:

  - *A* is given to near hold cell *Z* before the bid;
  - the sinc is the main hold cell which near hold cell *Z* marcs;
- the well is near hold cell *Q*.

Near Hold Shape

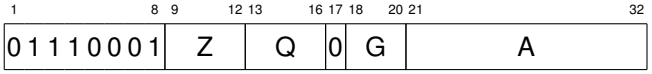


In this shape, the sinc and well are near hold cells *Z* and *Q*.

USS – Unsplit Stir

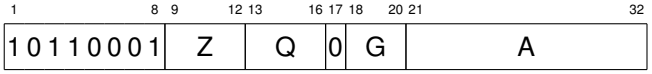
This bid's run hingges on its shape.

This bid has two shapes.



In this shape:

- the sinc is near hold cell *Z*;
- the well is the main hold cell which the tale of *A* and near hold cell *Q* marcs.



In this shape:

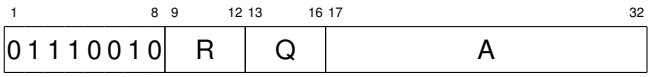
- the sinc is the main hold cell which the tale of *A* and near hold cell *Z* marcs;
- the well is near hold cell *Q*.

Sunderly, this bid will not run if a write to the sinc has happened after the last **USS** thereto.

BRS – Brooc Swich

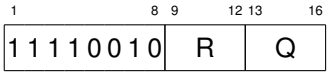
This bid's run hingges on its shape.

This bid has two shapes.



In this shape:

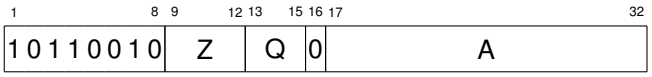
- *SD* is put in a main hold cell which near hold cell *R* marcs;
- a new stand dragin is loaded from the main hold cell which the tale of *A* and near hold cell *Q* marcs.



In this shape:

- *SD* is put in a main hold cell which near hold cell *R* marcs;
- a new stand dragin is loaded from the main hold cell which near hold cell *Q* marcs.

UDB – Underbreac



In this bid:

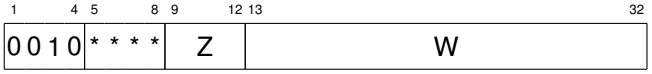
- the well is the pair of near hold cells $(Q, Q + 1)$;
- the sinc is the main hold cell which the tally of *A* and near hold cell *Z* marcs.

Tellling Bid

A tellling bid bewrites a reoning over lone telllings.

Each tellling bid has four shapes.

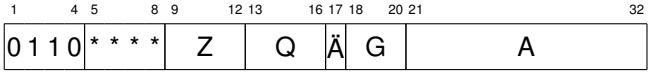
Fast Shape



In this shape:

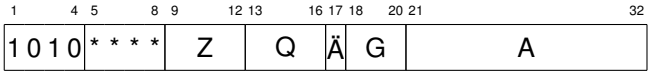
- the sinc is near hold cell *Z*;
- the well is *W*.

Main Hold Shape



In this shape:

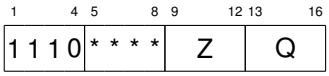
- the sinc is near hold cell *Z*;
- if the Ä-tellling is 0, then the well is the main hold cell which the tale of *A* and near hold cell *Q* marcs;
  otherwise:
  - the well is the main hold cell which near hold cell *Q* marcs;
  - *A* is given to near hold cell *Q* after the bid.



In this shape:

- if the Ä-tellling is 0, then the sinc is the main hold cell which the tale of *A* and near hold cell *Z* marcs;
  otherwise:
  - *A* is given to near hold cell *Z* before the bid;
  - the sinc is the main hold cell which near hold cell *Z* marcs;
- the well is near hold cell *Q*.

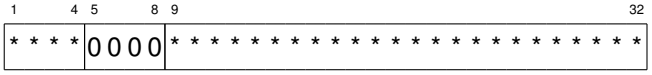
Near Hold Shape



In this shape, the sinc and well are near hold cells *Z* and *Q*.

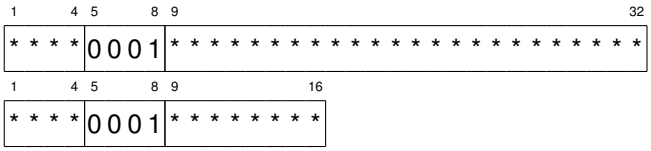
LSH – Left Shift

After this bid, the sinc is shifted to the left by the tally of telllings given by the well.



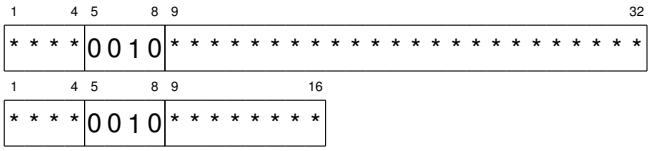
RNS – Right Naught Shift

After this bid, the sinc is shifted to the right by the tally of telllings given by the well. The leftmost telllings are set to 0.



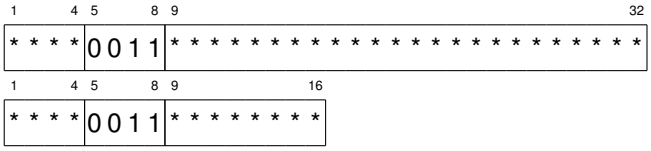
RFS – Right Sign Shift

After this bid, the sinc is shifted to the right by the tally of telllings given by the well. The leftmost telllings are set to the sinc's first tellling before the bid.



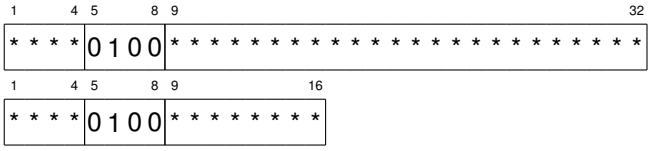
THR – Thraw

After this bid, the sinc is thrawn to the right by the tally of tellings given by the well.



AND – Throughcut

After this bid, each of the sinc's telllings will be set to the throughcut of the matching telllings of the sinc and the well.



OR – Foronening

After this bid, each of the sinc's telllings will be set to the foronening of the matching telllings of the sinc and the well.

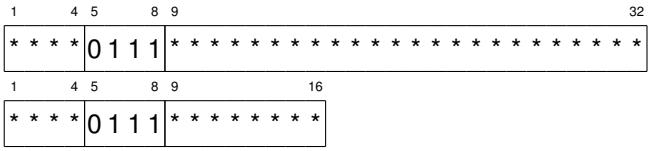
NOT – Not

After this bid, each of the sinc's telllings will be set to the swapped worth of the matching telllings of the well.

SSW – Sign Swap

After this bid, the sinc will be set to the wrixle of the well.

In the standing shape, the well is naught-filled.



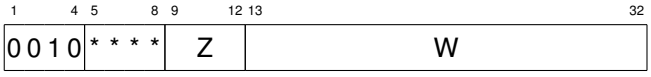
Recon Bid

A recon bid bewrites a reoning.

All recon bids recon over fast bystrice tales.

Each recon bid has four shapes.

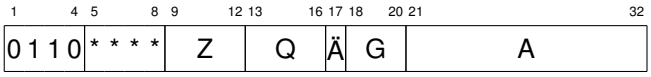
Fast Shape



In this shape:

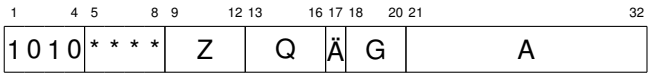
- the sinc is near hold cell *Z*;
- the well is *W*.

Main Hold Shape



In this shape:

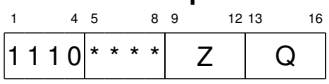
- the sinc is near hold cell *Z*;
- if the Ä-tellling is 0, then the well is the main hold cell which the tale of *A* and near hold cell *Q* marcs;
  otherwise:
  - the well is the main hold cell which near hold cell *Q* marcs;
  - *A* is given to near hold cell *Q* after the bid.



In this shape:

- if the Ä-tellling is 0, then the sinc is the main hold cell which the tale of *A* and near hold cell *Z* marcs;
  otherwise:
  - *A* is given to near hold cell *Z* before the bid;
  - the sinc is the main hold cell which near hold cell *Z* marcs;
- the well is near hold cell *Q*.

Near Hold Shape

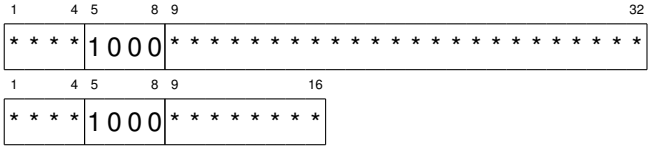


In this shape, the sinc and well are near hold cells *Z* and *Q*.

GIV – Togive

After this bid, the well is given to the sinc.

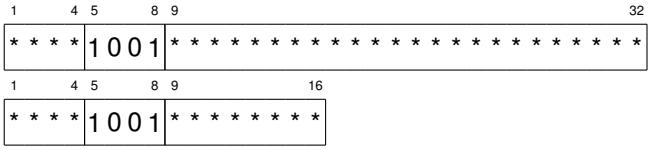
In the standing shape, the well is sign-filled.



TAC – Undershed

After this bid, the well is tacen from the sinc.

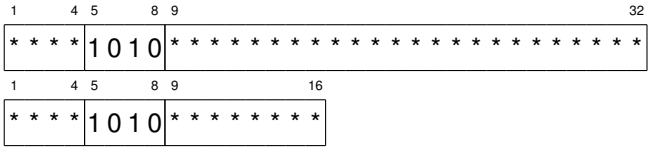
In the standing shape, the well is sign-filled.



FLD – Forfolding

After this bid, the well is folded by the sinc.

In the standing shape, the well is sign-filled.



CUT – Fordeal

After this bid, the well is cut by the sinc.

In the standing shape, the well is sign-filled.