Fastpath Logic Inc.

1.1 CSL FIFO get methods summary

```
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isa_field_obj_name.get_name();
isa_field_obj_name.get_mnemonic();
isa_field_obj_name.get_type();
isa_field_obj_name.get_lower_index();
isa_field_obj_name.get_upper_index();
isa_field_obj_name.get_width();


isa_field_obj_name.get_enum();
isa_field_obj_name.get_enum_item(enum_item_name);
isa_field_obj_name.set_value(num_expr);
isa_field_obj_name.get_value();
```

1.2 Get methods

Fastpath Logic Inc.

```
isa_field_obj_name.get_offset();
```

DESCRIPTION :

Returns the offset of the isa_field.

[*CSL ISA Syntax and Command Summary*]

EXAMPLE :

Sets the offset for the isa filed f_op2 using the *get_offset()* method.

CSL CODE

```
csl_isa_field f_op{
f_op(){
set_width(2);
set_type(opcode);
set_offset(1);
}
};
csl_isa_field f_op2{
f_op2(){
set_width(3);
set_type(opcode);
set_offset(f_op.get_offset());
}
};
```

VERILOG CODE

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```
isa_field_obj_name.get_name();
```

DESCRIPTION :

Returns the name of the isa_field.

[*CSL ISA Syntax and Command Summary*]

EXAMPLE :

Sets the name of isa filed *f_regb* using the *get_name()* method.

CSL CODE

```
csl_isa_field f_rega{
f_rega(){
set_width(6);
set_type(address);
set_name("reg_adr");
}
};
csl_isa_field f_regb{
f_regb(){
set_width(6);
set_type(address);
set_name(f_rega.get_name());
}
};
```

VERILOG CODE

```
isa_field_obj_name.get_mnemonic();
```

DESCRIPTION :

Returns the mnemonic of the isa_field.

[*CSL ISA Syntax and Command Summary*]

EXAMPLE :

Sets the abrevation for isa filed f_op2 using the *get_mnemonic()* method.

CSL CODE

```
csl_isa_field f_op{
f_op(){
set_width(2);
set_type(opcode);
set_mnemonic("alu");
}
};
csl_isa_field f_op2{
f_op2(){
set_width(3);
set_type(opcode);
set_mnemonic(f_op.get_mnemonic());
}
};
```

VERILOG CODE

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```
isa_field_obj_name.get_type();
```

DESCRIPTION :

Returns the type of the isa_field.

[*CSL ISA Syntax and Command Summary*]

EXAMPLE :

Sets the type of isa field *f_op2* using the type of *f_op* with *get_type()* method.

CSL CODE

```
csl_isa_field f_op(2);
f_op.set_type(opcode);

csl_isa_field f_op2(3);
f_op2.set_type(f_op.get_type());
```

VERILOG CODE

```
isa_field_obj_name.get_lower_index();
```

DESCRIPTION :

Returns the lower index of the isa_field.

[*CSL ISA Syntax and Command Summary*]

EXAMPLE :

Sets the lower index for the isa field *f_op2* using *get_lower_index()* method.

CSL CODE

```
csl_isa_field f_op(16,12);
f_op.set_type(opcode);
csl_isa_field f_op2(14,f_op.get_lower_index());
f_op2.set_type(subopcode);
```

VERILOG CODE

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```
isa_field_obj_name.get_upper_index();
```

DESCRIPTION :

Returns the upper index of the isa_field.

[*CSL ISA Syntax and Command Summary*]

EXAMPLE :

Sets the upper index for the isa field *f_alu* using *get_upper_index()* method.

CSL CODE

```
csl_isa_field f_op(16,12);
f_op.set_type(opcode);
csl_isa_field f_alu(f_op.get_upper_index(),f_op.get_lower_index());
f_alu.set_type(selector);
```

VERILOG CODE

```
isa_field_obj_name.get_width();
```

DESCRIPTION :

Returns the width of the isa_field.

[*CSL ISA Syntax and Command Summary*]

EXAMPLE :

Sets the width of isa filed *f_alu* using the *get_width()* method.

CSL CODE

```
csl_isa_field f_op{
f_op(){
set_width(2);
set_type(opcode);
}
};
csl_isa_field f_alu(f_op.get_width());
f_alu.set_type(selector);
```

VERILOG CODE

```
isa_field_obj_name.get_enum();
```

DESCRIPTION :

Returns the associated enum of the isa field object.

[*CSL ISA Syntax and Command Summary*]

EXAMPLE :

Associates the enum *op_code* to the isa field *f_op2,* using *get_enum()* method.

CSL CODE

```
csl_enum e_op{
  ADD,
  MOV,
  SUB
};
csl_isa_field f_op{
f_op(){
set_type(opcode);
set_width(2);
set_enum(op_code);
}
};
csl_isa_field f_op2{
f_op2(){
set_type(subopcode);
set_width(2);
set_enum(f_op.get_enum());
}
};
```

VERILOG CODE

```
isa_field_obj_name.get_enum_item(enum_item_name);
```

DESCRIPTION :

Returns the associated enum_item of the isa field object.

[*CSL ISA Syntax and Command Summary*]

EXAMPLE :

Associates an enum item *MOV* to the isa field f_*op2*,using *get_enum_item()* method.

CSL CODE

```
csl_enum e_op{
    ALU,
    MOV,
    BR
};
csl_isa_field f_op(2, e_op);
f_op.set_type(opcode);

csl_isa_field f_op2(3);
f_alu.set_type(opcode);

csl_isa_element isa {
isa() {
set_type(root_format);
set_width(32);
}
};
csl_isa_element f1: isa {
f_op f_op;
f1() {
set_type(instr_format);
set_position(f_op, 30);
f_op.set_enum_item(MOV);
}
};
csl_isa_element f2: f1 {
f_op2 f_op2;
f2() {
set_type(instr_format);
set_position(f_op2, 20);
f_op2.set_enum_item(f_op.get_enum_item());
    }
};
```

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VERILOG CODE

```
isa_field_obj_name.get_value();
```

DESCRIPTION :

Returns the associated numeric value of the isa field object.

[*CSL ISA Syntax and Command Summary*]

EXAMPLE :

Sets the numeric value for the isa field *rs* , using the *get_value()* method.

CSL CODE

```
csl_isa_field rd{
rd(){
set_width(6);
set_type(constant);
set_value(20);
}
};
csl_isa_field rs
rs(){
set_width(6);
set_type(constant);
set_value(rd.get_value());
}
};
```

VERILOG CODE