Naming conventions for IRS-1C/IRS-1D Fast Format products
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1. Introdution

The names of IRS-1C/IRS-1D products are designed to be unique for all possible data products. The second requirement is to have names which are eight characters long and have a three-character extension because, some file systems such as iso9660 and msdos don't work with longer names. Because some operating systems are handling file names case-insensitive we also only use digits and lower-case characters in it.

2. General layout of the file names

The names are containing different fields in a fixed order:

SPPRRYJJ.CCF

     S   sensor and scene differentiation
     PP   path number
     RR   row number
     Y   year of acquisition
     JJ   julian day of acquisition

     CC   product code
     F   file type

The fields PP, RR, Y, JJ and CC contain integer values. The field CC is to distinguish different products of the same scene. The value itself is only of internal interest.

The fields S and especially F are a little bit more complicated. Field S distinguishes different sensors, scenes and groups of subscenes. The field F on the other hand, distinguishes the different files (header file and data files) of different scenes and subscenes, dependant on the value of field S.

3. The coding of the fields in detail

3. 1 Coding of integer values

To spare some characters in fields containing integer values these values are coded to base 36. The set of digits in this system is A={0, ..., 9, a, ..., z} with |A|=36.

```
   0(10)  =    0(36)
         ...
   9(10)  =    9(36)
  10(10)  =    a(36)
         ...
  35(10)  =    z(36)
  36(10)  =   10(36)
         ...
```

Assume we have a scene received on 12-DEC-1996. The number of the julian day in this year is 347(10) so that the field JJ will be filled with 9n(36).

While coding path number, julian day of acquisition, and the product code in this way, we win 3 characters in the file name for other information.

3. 2 Coding the year of acquisition – field Y

The year of acquisition is coded as the offset to the base year 1990,
expressed as number to base 36.

    Y = ("year of acquisition" - "base year") (36)

Examples:
Year of acquisition 1996: 1996(10) - 1990(10) = 6(10) = 6(36) = Y
Year of acquisition 2000: 2000(10) - 1990(10) = 10(10) = a(36) = Y

3. 3 Sensor and scene differentiation – field S

Field S distinguishes different sensors, scenes and groups of subscenes
as shown in the following table.

value	sensor	satellite	scene and subscene distinction
a	PAN	IRS-1C	scene A, full scene, subscenes, stripes
b	PAN	IRS-1C	scene B, full scene, subscenes, stripes
c	PAN	IRS-1C	scene C, full scene, subscenes, stripes
d	PAN	IRS-1C	scene D, full scene, subscenes, stripes
e	PAN	IRS-1D	scene A, full scene, subscenes, stripes
f	PAN	IRS-1D	scene B, full scene, subscenes, stripes
g	PAN	IRS-1D	scene C, full scene, subscenes, stripes
h	PAN	IRS-1D	scene D, full scene, subscenes, stripes
l	LISS	IRS-1C	full scene, subscenes 1-6
m	LISS	IRS-1C	subscenes 7-12
n	LISS	IRS-1D	full scene, subscenes 1-6
o	LISS	IRS-1D	subscenes 7-12
w	WIFS	IRS-1C	
x	WIFS	IRS-1D	

3. 4 File distinction – field F

The field F distinguishes the different header and data files of
different scenes and subscenes dependant on the value of field S.

3. 4. 1 Field F in case of PAN data

If the value of field S is 'a', 'b', 'c' or 'd' we are talking about
PAN scenes A, B, C respectively D.

scene	value for data file	value for header file
full scene	0	a
subscene 1	1	b
subscene 2	2	c
subscene 3	3	d
subscene 4	4	e
subscene 5	5	f
subscene 6	6	g
subscene 7	7	h
subscene 8	8	i
subscene 9	9	j
left stripe L (A)	n	k
middle stripe M (B)	o	l
right stripe R (C)	p	m

Remark: The stripes were formerly marked as A, B, C for left, middle
and right by the indian reference scheme. Today they use L, M, R.

3. 4. 2 Field F in case of LISS data

If the value of field S is 'l' or 'm' we are talking about LISS data.
While looking into the following table, keep the value of field S (first
column), respectively the number of the subscene (second column), in mind.

S	scene	value for header file	value for data file of channel			
			2	3	4	5
l	full scene	0	2	3	4	5
l	subscene 1	6	7	8	9	a
l	subscene 2	b	c	d	e	f
l	subscene 3	g	h	i	j	k
l	subscene 4	l	m	n	o	p
l	subscene 5	q	r	s	t	u
l	subscene 6	v	w	x	y	z
m	subscene 7	0	2	3	4	5
m	subscene 8	6	7	8	9	a
m	subscene 9	b	c	d	e	f
m	subscene 10	g	h	i	j	k
m	subscene 11	l	m	n	o	p
m	subscene 12	q	r	s	t	u

3. 4. 3 Field F in case of WIFS data

If the value of field S is 'w' we have to do it with WIFS data.

scene	value for header file	value for data file of channel	
		3	4
full scene	0	1	2

4. Summary

As with almost everything these naming conventions have pros and cons.
Under hundreds of data products it is easy to find a specific product
without looking into a lot of header files. A drawback is that it isn't
easy to say which file is the header and which file is which band of
the image in the case of LISS data. A second drawback is that this
definition is not completed. The definition will expand when more
sensors occur.

APPENDIX A - Examples

```
a0v1470t.0ca    a  =  IRS-1C PAN scene A
                0v =  path 31
                14 =  row  40
                 7 =  year 1997
                0t =  29th day of the year, 29-JAN-1997
                0c =  internal product code
                 a =  header file of full scene
a0v1470t.0c0    a  =  IRS-1C PAN scene A
                0v =  path 31
                14 =  row  40
                 7 =  year 1997
```

```
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                0t  =  29th day of the year, 29-JAN-1997
                0c  =  internal product code
                 0  =  data file of full scene

a0n0u66j.0cg    a  =  IRS-1C PAN scene A
                0n  =  path 23
                0u  =  row 30
                 6  =  year 1996
                6j  =  235th day of the year, 22-AUG-1996
                0c  =  internal product code
                 g  =  header file of subscene 6
a0n0u66j.0c6    a  =  IRS-1C PAN scene A
                0n  =  path 23
                0u  =  row 30
                 6  =  year 1996
                6j  =  235th day of the year, 22-AUG-1996
                0c  =  internal product code
                 6  =  data file of subscene 6


l0s0v66k.000    l  =  IRS-1C LISS data, full scene or subscene 1 to 6
                0s  =  path 28
                0v  =  row 31
                 6  =  year 1996
                6k  =  236th day of the year, 23-AUG-1996
                00  =  internal product code
                 0  =  header file of full scene
l0s0v66k.003    l  =  IRS-1C LISS data, full scene or subscene 1 to 6
                0s  =  path 28
                0v  =  row 31
                 6  =  year 1996
                6k  =  236th day of the year, 23-AUG-1996
                00  =  internal product code
                 3  =  data file of full scene channel 3

w0s0v66k.010    w  =  IRS-1C WIFS data
                0s  =  path 28
                0v  =  row 31
                 6  =  year 1996
                6k  =  236th day of the year, 23-AUG-1996
                01  =  internal product code
                 0  =  header file
w0s0v66k.012    w  =  IRS-1C WIFS data
                0s  =  path 28
                0v  =  row 31
                 6  =  year 1996
                6k  =  236th day of the year, 23-AUG-1996
                01  =  internal product code
                 2  =  data file of channel 4

g1f19816.1aa    g  =  IRS-1D PAN scene C
                1f  =  path 51
                19  =  row 45
                 8  =  year 1998
                16  =  42th day of the year, 11-FEB-1998
                1a  =  internal product code
                 a  =  header file of full scene
g1f19816.1a0    g  =  IRS-1D PAN scene C
                1f  =  path 51
                19  =  row 45
                 8  =  year 1998
                16  =  42th day of the year, 11-FEB-1998
                1a  =  internal product code
                 0  =  data file of full scene

n0l10807.0t0    n  =  IRS-1D LISS data, full scene or subscene 1 to 6
                0l  =  path 21
                10  =  row 36
                 8  =  year 1998
```

```
                    Euromap Naming Conventions
              07  =  7th day of the year, 07-JAN-1998
              0t  =  internal product code
               0  =  header file of full scene
n0110807.0t3   n  =  IRS-1D LISS data, full scene or subscene 1 to 6
              01  =  path 21
              10  =  row 36
               8  =  year 1998
              07  =  7th day of the year, 07-JAN-1998
              0t  =  internal product code
               3  =  data file of full scene channel 3
```