

From abridle Tue Mar 21 16:52:36 1995

X-VM-v5-Data: ([nil nil nil nil nil nil t nil nil]

["1495" "Tue" "21" "March" "1995" "16:52:22" "-0500" "Alan Bridle" "abridle" nil "32" "Glossary" "^From:" nil nil "3" nil nil nil nil] nil)

Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)

id AA24194; Tue, 21 Mar 1995 16:52:22 -0500

Message-Id: <9503212152.AA24194@polaris.cv.nrao.edu>

From: abridle (Alan Bridle)

To: noordam@nfra.nl

Subject: Glossary

Date: Tue, 21 Mar 1995 16:52:22 -0500

Jan,

Gareth Hunt mentioned to me en passant that you were keen to start work on an AIPS++ glossary. You may note that I had suggested this in the proposal for the documentation system (<http://aips++/docs/html/design.html>). I have also begun looking into ways to convert the existing AIPS glossary (Appendix G of our old Cookbook) to a set of HTML files. That glossary was prepared by Fred Schwab and has been much used and gone over by a dozen years' worth of AIPS users. Eric Greisen has been keeping it up to date. My suggestion was to merge relevant parts of this with parts of Mark Holdaway's much smaller AIPS++-specific glossary and format the result into a set of html files in their own /docs/glossary directory: a.htm, b.htm, c.htm etc. I would use internal NAME references within each of these for each term being defined. The granularity of defining every term by its own html file would be difficult to support under AIPS++ check-in system, but it will probably be reasonable to have just 27 html files (one for each letter, one numeric? This scheme will still let one predict the references needed for anchors elsewhere, as the terms can be their own anchor names.

I have not gone far with this yet and will stop if this is something you want to do. Let us not duplicate effort.

You will note that the AIPS glossary contains a lot of mathematics. I would simply hold off on reproducing those sections until HTML 3.0 math is in use outside Arena.

Best wishes, A.

From abridle Tue Mar 21 20:36:46 1995
X-VM-v5-Data: ([nil nil nil nil nil nil nil nil nil
["1850" "Tue" "21" "March" "1995" "20:36:43" "-0500" "Alan Bridle" "abridle" nil "42" "forwarded message from
Alan Bridle" "^From:" nil nil "3" nil nil nil nil]
nil)
Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA18504; Tue, 21 Mar 1995 20:36:43 -0500
Message-Id: <9503220136.AA18504@polaris.cv.nrao.edu>
From: abridle (Alan Bridle)
To: tcornwel
Subject: forwarded message from Alan Bridle
Date: Tue, 21 Mar 1995 20:36:43 -0500

----- start of forwarded message (RFC 934 encapsulation) -----
Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA24194; Tue, 21 Mar 1995 16:52:22 -0500
Message-Id: <9503212152.AA24194@polaris.cv.nrao.edu>
From: abridle (Alan Bridle)
To: noordam@nfra.nl
Subject: Glossary
Date: Tue, 21 Mar 1995 16:52:22 -0500

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You will note that the AIPS glossary contains a lot of mathematics. I would simply hold off on reproducing those sections until HTML 3.0 math is in use outside Arena.

Best wishes, A.

----- end -----

From abridle Wed Mar 22 23:06:30 1995
X-VM-v5-Data: ([nil nil nil nil nil nil nil nil nil
["551" "Wed" "22" "March" "1995" "23:06:19" "-0500" "Alan Bridle" "abridle" nil "19" "Glossary" "^From:" nil nil
"3" nil nil nil nil]
nil)
Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA34646; Wed, 22 Mar 1995 23:06:19 -0500
Message-Id: <9503230406.AA34646@polaris.cv.nrao.edu>
From: abridle (Alan Bridle)
To: noordam@nfra.nl
Subject: Glossary
Date: Wed, 22 Mar 1995 23:06:19 -0500

Jan,

Brian tells me you have been away. Since my first message I have done about one-quarter of the conversion of Fred Schwab's glossary (automatic conversion via latex2html is too buggy and anyway I am doing some additional editing and adding of hypertext links that could not be automated). If you want to begin work on the more computer-oriented terms the simplest approach would be for me to mail to you an HTML template that you could use to keep the format the same as mine.

Let me know your preference when you have the time.

Alan B.

From root Thu Mar 23 06:10:52 1995
X-VM-v5-Data: ([nil nil nil nil t nil nil nil nil]
["1904" "Thu" "23" "March" "1995" "12:09:34" "+0100" "Jan Noordam" "JNoordam@nfra.nl"
"<9503231109.AA27277@duw01.nfra.nl>" "50" "Re: Glossary" "^From:" nil nil "3" nil nil nil nil]
nil)
Received: from rzmvx4.nfra.nl by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA36315; Thu, 23 Mar 1995 06:10:41 -0500
Received: from rzmws0.NFRA.NL (RZMWS0) by NFRA.NL (PMDF V4.3-7 #3695)
id <01HOH3UM9LZK91VUMC@NFRA.NL>; Thu, 23 Mar 1995 12:10:08 GMT+2
Received: from duw01.nfra.nl by rzmws0.NFRA.NL (4.1/SMI-4.1) id AA15668; Thu,
23 Mar 95 12:08:38 +0100
Received: by duw01.nfra.nl (5.0/SMI-SVR4) id AA27277; Thu,
23 Mar 1995 12:09:34 --100
In-Reply-To: <9503230406.AA34646@polaris.cv.nrao.edu>
Message-Id: <9503231109.AA27277@duw01.nfra.nl>
X-Envelope-To: abridle@polaris.cv.nrao.edu
Content-Transfer-Encoding: 7BIT
Content-Length: 1904
References: <9503230406.AA34646@polaris.cv.nrao.edu>
From: JNoordam@nfra.nl (Jan Noordam)
To: abridle@polaris.cv.nrao.edu (Alan Bridle)
Cc: noordam@RZMWS0.NFRA.NL
Cc: bglenden@nrao.edu
Cc: tcornwel@aoc.nrao.edu
Cc: olnon@NFRA.NL
Subject: Re: Glossary
Date: Thu, 23 Mar 1995 12:09:34 +0100

Hi Alan,

I have returned, and keen to start work on the Glossary. It is one of the goals of wrapping up the UVCI effort in Dwingeloo, and should be finished by the time Brian leaves (April 6th).

I think it is best for me to work under your guidance, certainly in terms of format, but also in terms of final agreement. However, I would like a commitment from the new PM that he is going to take nomenclature enforcement seriously, as one of his new responsibilities. In the past, this "Dutch hangup" has been smirked at too often (although I admit that we sometimes bring it up at the wrong moment).

> Since my first
> message I have done about one-quarter of the
> conversion of Fred Schwab's AIPS glossary...

I think it is probably all right to start with AIPS/VLA/NRAO nomenclature, because that is most widespread in the world. But we must weed out any sloppy compromises and inconsistencies therein, and we must try to look forward to new possibilities (e.g. multi-feed arrays, or the combination of different telescopes). Also, we should try to invent new terms for things like 'scan', which means something different at different places.

> If
> you want to begin work on the more computer-oriented

- > terms the simplest approach would be for me to mail
- > to you an HTML template that you could use to keep
- > the format the same as mine.

Perhaps you could go one step further, and convert the Glossary in Brian's AIPS++ Design document (for the December Review) as a starting point for me. It is more up-to-date than Mark Holdaway's version.

Thanks a lot. I look forward to working together.
Cheers,
Jan

--
--

Jan E. Noordam	
NFRA	Internet: "noordam@nfra.nl"
P.O.Box 2	Phone: (31)-5219-7244
7990 AA DWINGELOO	FAX: (31)-5219-7332
The Netherlands	

From abridle Thu Mar 23 12:25:40 1995

X-VM-v5-Data: ([nil nil nil nil nil nil t nil nil]

["4574" "Thu" "23" "March" "1995" "12:25:20" "-0500" "Alan Bridle" "abridle" nil "136" "Re: Glossary" "^From:" nil nil "3" nil nil nil nil] nil)

Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA42278; Thu, 23 Mar 1995 12:25:20 -0500

Message-Id: <9503231725.AA42278@polaris.cv.nrao.edu>

In-Reply-To: <9503231109.AA27277@duw01.nfra.nl>

References: <9503230406.AA34646@polaris.cv.nrao.edu>
<9503231109.AA27277@duw01.nfra.nl>

From: abridle (Alan Bridle)

To: JNoordam@nfra.nl, tcornwel, bglende, folnon@nfra.nl

Subject: Re: Glossary

Date: Thu, 23 Mar 1995 12:25:20 -0500

Jan Noordam writes:

>
>
> Hi Alan,
>
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> the goals of wrapping up the UVCI effort in Dwingeloo, and should be
> finished by the time Brian leaves (April 6th).
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> terms of format, but also in terms of final agreement.

Here is my current HTML template for a glossary file. Because the navigation links must be tightly bound to the rest of AIPS++ documents I am no longer thinking of running the glossary as a stand-alone system outside Unix, so its files can be a.html, b.html etc. Brian has seen a demo based on a few files (basically a through d) that I produced yesterday and this template is based on some discussions with him this a.m. I am fairly happy with the overall format when the definitions are a short paragraph or two in length. The umbrella document glossary.html is simply a brief title and an alphabetical index of pointers to the files. My goal is for each file to carry its own detailed index up front and some global navigation links at the end. We should also create a WAIS database from this so people can search it in other ways, but I have not looked into any details on that yet and am concentrating instead on the internal link structure.

```
<!DOCTYPE HTML PUBLIC "-//ISBN 82-7640-037::WWW//DTD HTML//EN//2.0" "html.dtd">
<HTML>
```

```
<HEAD>
<TITLE>AIPS++ Glossary</TITLE>
</HEAD>
```

```
<BODY>
<H1>D</H1>
<P>
<A HREF="#term1">term1</A><BR>
<A HREF="#term2">term2</A><BR>
```

term3

term4 equation

term5

term6

</P>
<HR>

<DL>

<DT>term1</DT>
<DD><P>definition</P></DD>

<DT>term2</DT>
<DD><P>definition</P></DD>

<DT>term3</DT>
<DD><P>definition</P></DD>

<DT>term4 equation</DT>
<DD>
<P>

First there is text with a variable <VAR> v(t)</VAR> and some
emphasis, mentioning a
related concept. This text uses
ISO-Latin text as much as possible to introduce the very important
equation that we absolutely must display before HTML Level 3.0 is
ready:</P>

<P></P>

<P>where</P>

<VAR>f(t)</VAR> is a function of time only and

<VAR>g(x,y,t)</VAR> is a function of space and time
defined in term1

<P></P>

</DD>

<DT>term5</DT>
<DD><P>definition</P></DD>

<DT>term6</DT>
<DD><P>definition</P></DD>

</DL>

<HR>

<P>You could now go back to the:</P>

previous document (use <KBD>back</KBD> on your browser)

Glossary Index

Online Documentation System Menu

AIPS++ Home Page

<HR>

<P>Copyright © 1995 Associated Universities Inc., Washington, D.C.</P>
<ADDRESS>abridle@nrao.edu, 23 March 1995, 12:05:45 EST</ADDRESS>

</BODY>
</HTML>

-
- > However, I
 - > would like a commitment from the new PM that he is going to take
 - > nomenclature enforcement seriously, as one of his new
 - > responsibilities. In the past, this "Dutch hangup" has been smirked
 - > at too often (although I admit that we sometimes bring it up at the
 - > wrong moment).
 - >

I am approaching this from the point of view of the naive user, who benefits indirectly from strict standards if such standards have prevented the programmers and scientists from getting confused. But I will leave questions of "enforcement" to Tim C. I am in favor of standards but I have no explicit role in applying them across this vast project!

A major advantage of the old AIPS glossary was that most of it was written by a mathematician. It has a mathematician's precision, rarely seen in astronomical documentation. I think we will do well if we can bring new stuff up to Fred's high standard.

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- > point for me. It is more up-to-date than Mark Holdaway's version.

I'll take a look at this, I had not seen it previously. Too much paper appeared together at a time when I was dealing with a medical crisis at home.

A.

From abridle Thu Mar 23 12:26:21 1995
X-VM-v5-Data: ([nil nil nil nil nil nil nil nil nil
["5107" "Thu" "23" "March" "1995" "12:26:19" "-0500" "Alan Bridle" "abridle" nil "149" "forwarded message from
Alan Bridle" "^From:" nil nil "3" nil nil nil nil]
nil)
Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA46893; Thu, 23 Mar 1995 12:26:19 -0500
Message-Id: <9503231726.AA46893@polaris.cv.nrao.edu>
From: abridle (Alan Bridle)
To: bglenden
Subject: forwarded message from Alan Bridle
Date: Thu, 23 Mar 1995 12:26:19 -0500

----- start of forwarded message (RFC 934 encapsulation) -----
Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA42278; Thu, 23 Mar 1995 12:25:20 -0500
Message-Id: <9503231725.AA42278@polaris.cv.nrao.edu>
In-Reply-To: <9503231109.AA27277@duw01.nfra.nl>
References: <9503230406.AA34646@polaris.cv.nrao.edu>
<9503231109.AA27277@duw01.nfra.nl>
From: abridle (Alan Bridle)
To: JNoordam@nfra.nl, tcornwel, bglende, folnon@nfra.nl
Subject: Re: Glossary
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```

```
<BODY>
<H1>D</H1>
<P>
<A HREF="#term1">term1</A>HBR>
<A HREF="#term2">term2</A><BR>
<A HREF="#term3">term3</A><BR>
<A HREF="#term4_equation">term4 equation</A><BR>
<A HREF="#term5">term5</A><BR>
<A HREF="#term6">term6</A><BR>
</P>
<HR>
```

```
<DL>
```

```
<DT><STRONG><A NAME="term1">term1</A></STRONG></DT>
<DD><P>definition</P></DD>
```

```
<DT><STRONG><A NAME="term2">term2</A></STRONG></DT>
<DD><P>definition</P></DD>
```

```
<DT><STRONG><A NAME="term3">term3</A></STRONG></DT>
<DD><P>definition</P></DD>
```

```
<DT><STRONG><A NAME="term4_equation">term4 equation</A></STRONG></DT>
<DD>
```

```
<P>
First there is text with a variable <VAR> v(t)</VAR> and some
<EM>emphasis</EM>, mentioning a
<A HREF="r.html#related_concept">related concept</A>. This text uses
ISO-Latin text as much as possible to introduce the very important
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ready:</P>
```

```
<P><IMG ALIGN=BOTTOM SRC="equation.gif"></P>
```

```
<P>where</P>
```

```
<UL>
```

```
<LI><VAR>f(t)</VAR> is a function of time only and</LI>
```

```
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defined in <A HREF="#term1">term1</A></LI>
```

```
</UL>
```

```
<P></P>
```

```
</DD>
```

```
<DT><STRONG><A NAME="term5">term5</A></STRONG></DT>
<DD><P>definition</P></DD>
```

```
<DT><STRONG><A NAME="term6">term6</A></STRONG></DT>
<DD><P>definition</P></DD>
```

```
</DL>
```

```
<HR>
```

```
<P>You could now go back to the:</P>
```

```
<UL>
```

previous document (use <KBD>back</KBD> on your browser)
Glossary Index
Online Documentation System Menu
AIPS++ Home Page

<HR>

<P>Copyright © 1995 Associated Universities Inc., Washington, D.C.</P>
<ADDRESS>abridle@nrao.edu, 23 March 1995, 12:05:45 EST</ADDRESS>
</BODY>
</HTML>

=====
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A.

----- end -----

From abridle Thu Mar 23 12:29:23 1995

X-VM-v5-Data: ([nil nil nil nil nil t nil nil]

["180" "Thu" "23" "March" "1995" "12:28:50" "-0500" "Alan Bridle" "abridle" nil "8" "Re: Glossary" "^From:" nil nil
"3" nil nil nil nil]
nil)

Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA41025; Thu, 23 Mar 1995 12:28:50 -0500

Message-Id: <9503231728.AA41025@polaris.cv.nrao.edu>

In-Reply-To: <9503231109.AA27277@duw01.nfra.nl>

References: <9503230406.AA34646@polaris.cv.nrao.edu>
<9503231109.AA27277@duw01.nfra.nl>

From: abridle (Alan Bridle)

To: JNoordam@nfra.nl (Jan Noordam)

Subject: Re: Glossary

Date: Thu, 23 Mar 1995 12:28:50 -0500

Jan,

I should have mentioned for clarity that the template file would be a
template for d.html, that's why there's a big D up front! All the
terms in it would start with d.

A.

From abridle Thu Mar 30 10:17:01 1995

X-VM-v5-Data: ([nil nil nil nil nil nil nil nil nil]

["309" "Thu" "30" "March" "1995" "10:16:44" "-0500" "Alan Bridle" "abridle" nil "10" "Re: Glossary" "^From:" nil
nil "3" nil nil
il nil]

nil)

Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)

id AA92163; Thu, 30 Mar 1995 10:16:44 -0500

Message-Id: <9503301516.AA92163@polaris.cv.nrao.edu>

In-Reply-To: <9503301456.AA05914@duw01.nfra.nl>

References: <9503301456.AA05914@duw01.nfra.nl>

From: abridle (Alan Bridle)

To: JNoordam@nfra.nl (Jan Noordam)

Subject: Re: Glossary

Date: Thu, 30 Mar 1995 10:16:44 -0500

Thanks, Jan.

I will merge your material with the rest a.s.a.p.

Right now there is a hold-up in getting the directory created and the files checked in, due to the baroque nature of the check-in system and some misunderstandings with Mark Calabretta about set-up and privileges. But I am getting close.

A.

From abridle Mon Apr 3 18:08:01 1995

X-VM-v5-Data: ([nil nil nil nil nil nil nil nil nil]

["1850" "Mon" "3" "April" "1995" "18:07:52" "-0400" "Alan Bridle" "abridle" nil "43" "Re: Glossary" "^From:" nil nil "4" nil nil nil nil])

Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA69795; Mon, 3 Apr 1995 18:07:52 -0400

Message-Id: <9504032207.AA69795@polaris.cv.nrao.edu>

In-Reply-To: <9503231109.AA27277@duw01.nfra.nl>

References: <9503230406.AA34646@polaris.cv.nrao.edu>
<9503231109.AA27277@duw01.nfra.nl>

From: abridle (Alan Bridle)

To: JNoordam@nfra.nl (Jan Noordam)

Subject: Re: Glossary

Date: Mon, 3 Apr 1995 18:07:52 -0400

Jan,

So that you can get an idea of the "look and feel" and also the scope of what I am up to, I have checked in drafts of the glossary files from A through O, with their associated GIF files. The umbrella page can be accessed as:

`../aips++/docs/glossary/glossary.html`

Note that I intend this glossary to serve a broader, and also slightly different, purpose than its AIPS++ predecessors. It is aimed at users who may need definitions of basic astronomical and mathematical terms, as well as as programmers and AIPS++ "insiders".

Note also that this is still very much under construction, and I am letting you know about it for feedback and comments; it is not ready for public access in numerous ways. For a start, it needs files P through Z. No links starting in these letters are even available yet. Also I have not yet had time to check and insert all of the links that should already be there. There are some dead-ends. But I thought you might want to see the general direction I am going in, and the scale of the target, before I go much further.

I have not yet included any of your items dealing with the "A matrix" formalism or the "Green Bank model". On reading the draft I felt these should be consolidated and I have that on my "to do" list. I have done some other consolidations where I felt the existing text was either repetitive or did not explain terms in isolation very clearly.

I have also generalized some of the definitions beyond the strict AIPS++ context. In doing so I may have done some violence to the truth. I trust that you and Brian will soon tell me, when this has occurred.

Fred Schwab has not-exactly-volunteered to read the draft for mathematical correctness (i.e. for old times' sake he will do me that favor). I'll ask him to look at it once I have a pass across all the files.

Regards, A.

From abridle Tue Apr 4 16:54:26 1995

X-VM-v5-Data: ([nil nil nil nil nil nil nil nil nil

["139" "Tue" "4" "April" "1995" "16:54:18" "-0400" "Alan Bridle" "abridle" nil "8" "Re: Glossary" "^From:" nil nil
"4" nil nil nil nil]
nil)

Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA70170; Tue, 4 Apr 1995 16:54:18 -0400

Message-Id: <9504042054.AA70170@polaris.cv.nrao.edu>

In-Reply-To: <9504040736.AA24923@duw01.nfra.nl>

References: <9503230406.AA34646@polaris.cv.nrao.edu>
<9503231109.AA27277@duw01.nfra.nl>
<9504032207.AA69795@polaris.cv.nrao.edu>
<9504040736.AA24923@duw01.nfra.nl>

From: abridle (Alan Bridle)

To: JNoordam@nfra.nl (Jan Noordam)

Subject: Re: Glossary

Date: Tue, 4 Apr 1995 16:54:18 -0400

Jan,

The P file is now checked in, with extra GIFs that
it required.

This was a long one as I needed to learn some more mathematics.

A.

From abridle Fri Apr 7 17:20:59 1995

X-VM-v5-Data: ([nil nil nil nil nil nil nil nil nil]

["1190" "Fri" "7" "April" "1995" "17:20:44" "-0400" "Alan Bridle" "abridle" nil "27" "Glossary" "^From:" nil nil "4"
nil nil nil nil]
nil)

Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA95451; Fri, 7 Apr 1995 17:20:44 -0400

Message-Id: <9504072120.AA95451@polaris.cv.nrao.edu>

From: abridle (Alan Bridle)

To: JNoordam@nfra.nl

Subject: Glossary

Date: Fri, 7 Apr 1995 17:20:44 -0400

Jan, I have now checked in files Q and R, and most of S so that you have as much as possible of the work to view when you have time. I shall finish S on Monday, then there will be a bit of a pause as I have to work on some other things.

You will note my use of antenna/i.f. gain maintaining the terminology that we (NRAO) used previously for what I believe you will now want to call receptor gain. We always recognized the need to distinguish it from the engineering term "antenna gain" but it is a fact of life that radio interferometrists have fallen into the habit of using "antenna gain" to mean something different from the radio engineers' meaning. And which is less precisely unique to the antenna.

It is however unique to the antenna/i.f. combination in most systems and there is some advantage to keeping a term that is almost the one in common use, rather than bringing in a completely new one. There are arguments on both sides of this however and I am sure we shall hear them. I will expect to treat this like other cases where there is multiple terminology, some of which is inexact. You will find various examples distributed through the Glossary!

Regards, A.

From root Thu Apr 13 11:51:23 1995
X-VM-v5-Data: ([nil nil nil nil t nil nil nil nil]
["1917" "Thu" "13" "April" "1995" "17:50:16" "+0100" "Jan Noordam" "JNoordam@nfra.nl"
"<9504131550.AA28878@duw01.nfra.nl>" "44" "Re: Glossary" "^From:" nil nil "4" nil nil nil nil]
nil)
Received: from rzmvx4.nfra.nl by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA25344; Thu, 13 Apr 1995 11:51:19 -0400
Received: from rzmws0.NFRA.NL (RZMWS0) by NFRA.NL (PMDF V4.3-7 #3695)
id <01HPART9UTYO8WW2B5@NFRA.NL>; Thu, 13 Apr 1995 17:49:13 GMT+2
Received: from duw01.nfra.nl by rzmws0.NFRA.NL (4.1/SMI-4.1) id AA18950; Thu,
13 Apr 95 17:48:54 +0200
Received: by duw01.nfra.nl (5.0/SMI-SVR4) id AA28878; Thu,
13 Apr 1995 17:50:16 --100
In-Reply-To: <9504072120.AA95451@polaris.cv.nrao.edu>
Message-Id: <9504131550.AA28878@duw01.nfra.nl>
X-Envelope-To: abridle@polaris.cv.nrao.edu
Content-Transfer-Encoding: 7BIT
Content-Length: 1917
References: <9504072120.AA95451@polaris.cv.nrao.edu>
From: JNoordam@nfra.nl (Jan Noordam)
To: abridle@polaris.cv.nrao.edu (Alan Bridle)
Subject: Re: Glossary
Date: Thu, 13 Apr 1995 17:50:16 +0100

Hi Alan,

I have finally found the time to look at the fruit of your mighty labours, and I must say that I am very impressed.

However, you are right in suspecting that I would have problems with things like "antenna/i.f.". I strongly feel that we are not serving our users very well by perpetuating ambiguous terms to which (part of) the community has gotten used to, at the cost of confusing them. They will get used to a few new terms quickly enough, particularly if they are used more consistently than the old ones.

My concern with standard, unambiguous and precisely defined nomenclature is only partly the convenience of the end-user, but very much also to make sure that application programmers worldwide can read and understand each other's code, so that they can build on it. That is why I slipped in "official" abbreviations, like "rcpt" for receptor. The Glossary is the natural guide and arbiter in this process.

For instance: Brian, Mark and I argued long and hard about our definition of the trio "antenna (ant)", "feed (feed)" and "receptor (rcpt)". It is not perfect, but at least it is unambiguous, and also takes future developments into account. It covers single dishes, interferometers, multi-feed arrays and "funny" things like tied array's and compound ifrs. I am convinced that we will regret it if we do not enforce the use of precise terms from the start, in programs and user interface.

By the way: Your definitions of receptors in the descriptions of antenna and feed are not consistent: in my view, the receptors within the same feed have different polarisations, but are tuned to the SAME

frequency band. I have not found any other blemishes, but I have not yet looked very exhaustively. Keep up the good work!

Cheers,
Jan

-- -- Jan E. Noordam | NFRA | Internet:
> "noordam@nfra.nl" P.O.Box 2 | Phone: (31)-5219-7244 7990 AA
> DWINGELOO | FAX: (31)-5219-7332 The Netherlands |

From root Thu Apr 13 12:18:17 1995

X-VM-v5-Data: ([nil nil nil nil nil nil nil nil nil]

["188" "Thu" "13" "April" "1995" "10:18:13" "-0600" "Tim Bastian" "tbastian@aoc.nrao.edu" nil "4" "upgrade"
"^From:" nil nil "4" nil nil nil nil]
nil)

Received: from phaeton.aoc.nrao.edu by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA39189; Thu, 13 Apr 1995 12:18:16 -0400

Received: bn phaeton.aoc.nrao.edu (5.65c/1.3pmg)
id AA04630; Thu, 13 Apr 1995 10:18:13 -0600

Message-Id: <199504131618.AA04630@phaeton.aoc.nrao.edu>

From: Tim Bastian <tbastian@aoc.nrao.edu>

To: abridle

Subject: upgrade

Date: Thu, 13 Apr 1995 10:18:13 -0600

Alan, I'm off to California for the coming week. I'll probably
give you a call from there. I sent you a copy of the list of
VLA science "highlights". Feel free to tweak it. Regards, Tim

From abridle Thu Apr 13 13:57:51 1995

X-VM-v5-Data: ([nil nil nil nil nil nil nil nil nil]

["3116" "Thu" "13" "April" "1995" "13:57:38" "-0400" "Alan Bridle" "abridle" nil "62" "Re: Glossary" "^From:" nil nil "4" nil nil nil nil] nil)

Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA39294; Thu, 13 Apr 1995 13:57:38 -0400

Message-Id: <9504131757.AA39294@polaris.cv.nrao.edu>

In-Reply-To: <9504131550.AA28878@duw01.nfra.nl>

References: <9504072120.AA95451@polaris.cv.nrao.edu>
<9504131550.AA28878@duw01.nfra.nl>

From: abridle (Alan Bridle)

To: JNoordam@nfra.nl (Jan Noordam)

Subject: Re: Glossary

Date: Thu, 13 Apr 1995 13:57:38 -0400

Jan Noordam writes:

- >
- > However, you are right in suspecting that I would have problems with
- > things like "antenna/i.f.". I strongly feel that we are not serving
- > our users very well by perpetuating ambiguous terms to which (part of)
- > the community has gotten used to, at the cost of confusing them.
- > They will get used to a few new terms quickly enough, particularly if
- > they are used more consistently than the old ones.

I don't want to perpetuate ambiguous terms either. Our goal must be to have a completely unambiguous definition of whatever terms are used in an ongoing way. However, it is also dangerous to introduce new terminology that is also opaque -- the "Yeg" was a very bad example that AIPS++ not live down soon! I will admit to being confused about what you mean 'receptor' to cover, and I would ask that you write it down more explicitly.

To be specific, the "antenna/if gain" is precisely the $g(t)$ term as I defined it. We can certainly name it something else, e.g. the receptor gain, but it will be the g term so far as any algorithm is concerned. I have read your definition of receptor to mean parts of the system that would not quite encompass this. Specifically, the g term contains contributions that would be in common to all receptors on an antenna at a given frequency (because of pointing errors, loss of gain due to ice on the surface etc.). It also includes amplitude and phase fluctuations from the i.f. system. Is the i.f. electronics part of the receptor? This was unclear to me from your message (remember I have not been part of the background discussions, I have just your paragraph to work from). If it is, we must say so. In any case, I believe that the g will be more than just a receptor gain though it contains many contributions that are a receptor gain. I have no problem with continuing to use the terms "antenna", "feed" and "i.f. system" provided we demarcate them clearly. All of them make contributions to g .

So I think the next move should be for you, Mark and Brian, to define the term "receptor gain" according to your precepts. If it is the g term, then it has contributions from the antenna. If it is not, then we need to specify the factorization of the g term into antenna, feed and receptor components somewhere.

>
> By the way: Your definitions of receptors in the descriptions of
> antenna and feed are not consistent: in my view, the receptors within
> the same feed have different polarisations, but are tuned to the SAME
> frequency band. I have not found any other blemishes, but I have not
> yet looked very exhaustively. Keep up the good work!
>

Quite so, I was probing two possible interpretations of your receptor here, as I am not sure which it was that you intended.

I'm glad you like the overall appearance, there are many details that need work and that we must eventually agree on. I feel it is very important that we do this before the Glossary itself gets linked to the Home Page! I will however mention to aips2-doc as soon as the first full set of files is present, later today.

A.

From root Thu Apr 13 18:24:05 1995

X-VM-v5-Data: ([nil nil nil nil nil nil nil nil nil]

["1745" "Thu" "13" "April" "1995" "18:23:46" "-0400" "Alan Bridle" "abridle@polaris.cv.nrao.edu" nil "41" "Easter

Egg = Glossary" "^From:" nil nil "4" nil nil nil nil]
nil)

Received: from cv3.cv.nrao.edu by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA41885; Thu, 13 Apr 1995 18:24:04 -0400

Received: from baboon.cv.nrao.edu by cv3.cv.nrao.edu (4.1/DDN-DLB/1.13)
id AA13615; Thu, 13 Apr 95 18:23:50 EDT

Received: from polaris.cv.nrao.edu by baboon.cv.nrao.edu (4.1/DDN-CV/1.8)
id AA10439; Thu, 13 Apr 95 18:23:47 EDT

Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA37522; Thu, 13 Apr 1995 18:23:46 -0400

Message-Id: <9504132223.AA37522@polaris.cv.nrao.edu>

From: abridle@polaris.cv.nrao.edu (Alan Bridle)

To: aips2-doc@polaris.cv.nrao.edu

Subject: Easter Egg = Glossary

Date: Thu, 13 Apr 1995 18:23:46 -0400

GentleAIPS,

I have now completed the initial check-in of the full infrastructure for an AIPS++ Glossary aimed at the general astronomical user. It combines elements of an earlier glossary that was built for Classic AIPS by Fred Schwab with others from the Glendening/Noordam AIPS++ glossary, and yet others that I am adding myself.

It can be accessed at:

<http://../aips++/docs/glossary/glossary.html>

I will be interested in comments of all kinds on the format, scope and content of this Glossary, which I expect to enlarge continually as the project evolves. The definitions included now are mainly in the areas of general astronomy, radio interferometry, general computer terms and some OOP and AIPS++ terms. There is very little (yet) on single-dish terminology, or about the concepts in the "Green Bank"/A Matrix model. These are the next areas that I expect to work on.

Notes of errors, suggestions for items to add (especially accompanied by suggested definitions!), and comments on the overall look-and-feel of this draft will all be most welcome. I do not intend to link it to the AIPS++ Home Page yet as I would like to get feedback from a range of possible users before doing this.

Note that the mathematical content of the Glossary is expressed largely via in-line images (transparent GIFs). This is temporary, and will be replaced with math-mode in HTML3.0 as soon as this technology appears in both Mosaic and Netscape. Loading the in-line images is a little slow under older versions of Mosaic, but is faster under Netscape and may be faster under newer MosaiCs. Both performance and neatness on the screen should be improved significantly when I can use HTML3.0 for the math.

A happy Easter to you all,

A.

From root Fri Apr 14 08:50:43 1995
X-VM-v5-Data: ([nil nil nil nil t nil nil nil nil]
["1719" "Fri" "14" "April" "1995" "14:49:34" "+0100" "Jan Noordam" "JNoordam@nfra.nl"
"<9504141249.AA29458@duw01.nfra.nl>" "45" "Re: Glossary" "^From:" nil nil "4" nil nil nil nil]
nil)
Received: from rzmvx4.nfra.nl by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA40439; Fri, 14 Apr 1995 08:50:39 -0400
Received: from rzmws0.NFRA.NL (RZMWS0) by NFRA.NL (PMDF V4.3-7 #3695)
id <01HPBZSKEYW08WW2NJ@NFRA.NL>; Fri, 14 Apr 1995 14:48:30 GMT+2
Received: from duw01.nfra.nl by rzmws0.NFRA.NL (4.1/SMI-4.1) id AA21479; Fri,
14 Apr 95 14:48:11 +0200
Received: by duw01.nfra.nl (5.0/SMI-SVR4) id AA29458; Fri,
14 Apr 1995 14:49:34 --100
In-Reply-To: <9504131757.AA39294@polaris.cv.nrao.edu>
Message-Id: <9504141249.AA29458@duw01.nfra.nl>
X-Envelope-To: abridle@polaris.cv.nrao.edu
Content-Transfer-Encoding: 7BIT
Content-Length: 1719
References: <9504072120.AA95451@polaris.cv.nrao.edu>
<9504131550.AA28878@duw01.nfra.nl> <9504131757.AA39294@polaris.cv.nrao.edu>
From: JNoordam@nfra.nl (Jan Noordam)
To: abridle@polaris.cv.nrao.edu (Alan Bridle)
Cc: noordam@RZMWS0.NFRA.NL
Cc: bglenden@nrao.edu
Cc: mwiering@atnf.csiro.au
Subject: Re: Glossary
Date: Fri, 14 Apr 1995 14:49:34 +0100

> So I think the next move should be for you, Mark and Brian, to define
> the term "receptor gain" according to your precepts. If it is the g
> term, then it has contributions from the antenna. If it is not, then
> we need to specify the factorization of the g term into antenna, feed
> and receptor components somewhere.

With "receptor gain", we indeed mean the g-term, as used in Selfcal.
Perhaps the solution is to call it the "if-gain", except for the fact
that it can be confused with multiplicative "ifr-gain" ($g(ij)$, which
should be included in your formula). In fact, if-gain would be better
than receptor gain, because a VLA if-channel is in fact a linear
combination of two receptor signals.

So we would have:

- antenna: holder of one or more feeds.
- feed: collection of 1 or more (usually 2) receptors, which
have the same position, but different polarisations,
and are tuned to the same frequency.
- receptor: signal-pickoff device (e.g. dipole)
- if-gain: $g(i)$
- ifr-gain: $g(ij)$ (multiplicative)
- ifr-offset: $e(ij)$ (additive)
- antenna gain: if you insist on including it, only the radio
engineering meaning.
- receptor gain: --

The consequence of this is that I will have to rename my

ReceptorGainsSolver to IfGainsSolver. Not very attractive, but I am prepared to suffer for my principles.

Do you have any better ideas?

Cheers,
Jan

--
--

Jan E. Noordam		
NFRA		Internet: "noordam@nfra.nl"
P.O.Box 2		Phone: (31)-5219-7244
7990 AA DWINGELOO		FAX: (31)-5219-7332
The Netherlands		

From abridle Mon Apr 17 09:43:16 1995

X-VM-v5-Data: ([nil nil nil nil nil nil nil nil nil

["2590" "Mon" "17" "April" "1995" "09:43:07" "-0400" "Alan Bridle" "abridle" nil "58" "Re: Glossary" "^From:" nil nil "4" nil nil nil nil] nil)

Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03) id AA46979; Mon, 17 Apr 1995 09:43:07 -0400

Message-Id: <9504171343.AA46979@polaris.cv.nrao.edu>

In-Reply-To: <9504141249.AA29458@duw01.nfra.nl>

References: <9504072120.AA95451@polaris.cv.nrao.edu>
<9504131550.AA28878@duw01.nfra.nl>
<9504131757.AA39294@polaris.cv.nrao.edu>
<9504141249.AA29458@duw01.nfra.nl>

From: abridle (Alan Bridle)

To: JNoordam@nfra.nl (Jan Noordam)

Subject: Re: Glossary

Date: Mon, 17 Apr 1995 09:43:07 -0400

Jan Noordam writes:

>

>

> With "receptor gain", we indeed mean the g -term, as used in Selfcal.

> Perhaps the solution is to call it the "if-gain", except for the fact

> that it can be confused with multiplicative "ifr-gain" ($g(ij)$, which

> should be included in your formula). In fact, if-gain would be better

> than receptor gain, because a VLA if-channel is in fact a linear

> combination of two receptor signals.

>

O.K., I see several things here that need to be clarified.

1. I am trying to define the part of the gain that is factorable into $g_{i,j}$ only. Thus I do not include anything which might end up as a g_{ij} . I will add a line to clarify this, as I have included the additive part before dropping it also.

2. I think we either must not call g_i the receptor gain or we must include the i.f. chain in the receptor. I would prefer to keep the term receptor for the signal-pickoff device as you suggest, and use a name other than receptor gain for the g_i , given that these do have strictly antenna-originated (pre-receptor) contributions.

In fact, one can argue for the term "antenna/i.f. gain" to be continued because it identifies the first and last elements of the the chain of devices that contributes to the separable part of the multiplicative gain. I will draft something a little more explicit saying that, and then see if you can approve it.

> So we would have:

>

> - antenna: holder of one or more feeds.

> - feed: collection of 1 or more (usually 2) receptors, which

> have the same position, but different polarisations,

> and are tuned to the same frequency.

> - receptor: signal-pickoff device (e.g. dipole)

> - if-gain: $g(i)$

> - ifr-gain: $g(ij)$ (multiplicative)

- > - ifr-offset: e(ij) (additive)
- > - antenna gain: if you insist on including it, only the radio
- > engineering meaning.

I do believe it is essential to define "antenna gain" as I do now, i.e, identifying one "correct" usage and one "incorrect". Many radio astronomers will hear it used in both contexts, It helps if a glossary takes note of incorrect, common usages and points out what they can be confused with. This is not the same thing as promoting both usages, Mentioning a common but incorrect use may help a student understand what it was that was confusing a discussion with someone else. There are a couple of other such instances in the glossary, e.g. "intensity". Also several cases where a term is commonplace but ill-founded, i.e. "background noise".

Thanks, A.

From abridle Mon Apr 17 17:06:43 1995

X-VM-v5-Data: ([nil nil nil nil nil nil nil nil nil

["480" "Mon" "17" "April" "1995" "17:06:35" "-0400" "Alan Bridle" "abridle" nil "15" "Re: Glossary" "^From:" nil nil "4" nil nil nil nil nil)

Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA39297; Mon, 17 Apr 1995 17:06:35 -0400

Message-Id: <9504172106.AA39297@polaris.cv.nrao.edu>

In-Reply-To: <9504141249.AA29458@duw01.nfra.nl>

References: <9504072120.AA95451@polaris.cv.nrao.edu>
<9504131550.AA28878@duw01.nfra.nl>
<9504131757.AA39294@polaris.cv.nrao.edu>
<9504141249.AA29458@duw01.nfra.nl>

From: abridle (Alan Bridle)

To: JNoordam@nfra.nl (Jan Noordam)

Subject: Re: Glossary

Date: Mon, 17 Apr 1995 17:06:35 -0400

Jan

re antenna/i.f. gain definition and "antenna" entry:

There is new text and new equations in the cv master copy now,
take a look at a.html there or in your local copy after the next exhale.
I hope this will properly reflect the measure of our agreement!

I am now doing some small tidyings-up and additions for consistency,
my strategy had changed a little between a and z! I will not make any
major changes until I have comments from a few people.

Regards, A.

From root Tue Apr 18 16:57:02 1995

X-VM-v5-Data: ([nil nil nil nil t nil nil nil nil]

["138" "Tue" "18" "April" "1995" "16:57:01" "-0400" "Brian Glendenning" "bglenden@nrao.edu"

"<9504182057.AA05895@colobus.cv.nrao.edu>" "6" "Glossary entry(ies)?" "^From:" nil nil "4" nil nil nil nil]
nil)

Received: from colobus.cv.nrao.edu by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)

id AA30764; Tue, 18 Apr 1995 16:57:02 -0400

Received: by colobus.cv.nrao.edu (5.x/S2.3/NRAO-CV/2.3)

id AA05895; Tue, 18 Apr 1995 16:57:01 -0400

Message-Id: <9504182057.AA05895@colobus.cv.nrao.edu>

From: bglenden@NRAO.EDU (Brian Glendenning)

To: abridle@colobus.cv.nrao.edu

Subject: Glossary entry(ies)?

Date: Tue, 18 Apr 1995 16:57:01 -0400

<http://baboon.cv.nrao.edu:80/aips%2b%2b/docs/trial/implement/Fitting.html>

If not the glossary, where should such information go?

Brian

From abridle Wed Apr 19 12:46:10 1995

X-VM-v5-Data: ([nil nil nil nil nil nil nil nil]

["605" "Wed" "19" "April" "1995" "12:46:08" "-0400" "Alan Bridle" "abridle" nil "15" "Re: Glossary entry(ies)?"
"^From:" nil nil "4" nil nil nil nil]
nil)

Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA27314; Wed, 19 Apr 1995 12:46:08 -0400

Message-Id: <9504191646.AA27314@polaris.cv.nrao.edu>

In-Reply-To: <9504182057.AA05895@colobus.cv.nrao.edu>

References: <9504182057.AA05895@colobus.cv.nrao.edu>

From: abridle (Alan Bridle)

To: bglenden@NRAO.EDU (Brian Glendenning)

Subject: Re: Glossary entry(ies)?

Date: Wed, 19 Apr 1995 12:46:08 -0400

Brian,

I think it's suitable for the Glossary, but I'll break it up into a couple of entries. It will also be possible to reduce the number of GIFs significantly by using HTML itself a little more. I'll look into that to reduce load-time and will also use some of the Strom GIF-set as they align with the normal text much better than Latex2HTML's output when subscripts are used.

It might however also remain suitable as part of the introduction to a class. This is the sort of judgment that can best be made a bit later when we see the overall form of the programmer-oriented documentation.

A.

From root Mon Apr 24 05:44:19 1995
X-VM-v5-Data: ([nil nil nil nil t nil nil nil nil]
["2219" "Mon" "24" "April" "1995" "11:43:02" "+0100" "Jan Noordam" "JNoordam@nfra.nl"
"<9504240943.AA13930@duw01.nfra.nl>" "56" "Re: Glossary" "^From:" nil nil "4" nil nil nil nil]
nil)
Received: from rzmvx4.nfra.nl by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA22944; Mon, 24 Apr 1995 05:44:17 -0400
Received: from rzmws0.NFRA.NL (RZMWS0) by NFRA.NL (PMDf V4.3-7 #3695)
id <01HPPS7KDF7K8WW7P6@NFRA.NL>; Mon, 24 Apr 1995 11:41:51 GMT+2
Received: from duw01.nfra.nl by rzmws0.NFRA.NL (4.1/SMI-4.1) id AA06099; Mon,
24 Apr 95 11:41:28 +0200
Received: by duw01.nfra.nl (5.0/SMI-SVR4) id AA13930; Mon,
24 Apr 1995 11:43:02 --100
In-Reply-To: <9504172106.AA39297@polaris.cv.nrao.edu>
Message-Id: <9504240943.AA13930@duw01.nfra.nl>
X-Envelope-To: abridle@polaris.cv.nrao.edu
Content-Transfer-Encoding: 7BIT
Content-Length: 2219
References: <9504072120.AA95451@polaris.cv.nrao.edu>
<9504131550.AA28878@duw01.nfra.nl> <9504131757.AA39294@polaris.cv.nrao.edu>
<9504141249.AA29458@duw01.nfra.nl> <9504172106.AA39297@polaris.cv.nrao.edu>
From: JNoordam@nfra.nl (Jan Noordam)
To: abridle@polaris.cv.nrao.edu (Alan Bridle)
Subject: Re: Glossary
Date: Mon, 24 Apr 1995 11:43:02 +0100

Hi Alan,

- > There is new text and new equations in the cv master copy now,
- > take a look at a.html there or in your local copy after the next exhale.
- > I hope this will properly reflect the measure of our agreement!

I think that we are converging:

-) I accept "antenna/i.f.gain" and "antenna/i.f.phase", assuming that we will start using the abbreviations "IFGain" and IFPhase" before too long (perhaps you should provide extra entries for that, referring back to the full name). I will rename my ReceptorGainSolver to IFGainSolver.

-) By the way: the antenna is not the first element in the chain that makes up the IFGain: the troposphere and ionosphere also contribute.

-) The definitions for Receptor, Feed and Antenna are OK. For me, the most important thing is that we now have a consistent convention.

-) I still feel that the gain-formula should be complete, i.e. that there should be a term for an ifr-based (non-i.f.-decomposable) multiplicative "IfrGain".

-) I have a new quibble: the use of the word "baseline" for interferometer. Worse, it is used arbitrarily for antenna-pair, feed-pair and receptor-pair, and thus intolerably ambiguous. However, I do not feel as strongly about it as about receptors etc.

- > I am now doing some small tidying-up and additions for consistency,

> my strategy had changed a little between a and z! I will not make any
> major changes until I have comments from a few people.

I wish I had the time to go through the entire glossary to provide feedback. I will do my best to do it in installments before the summer. I will be away for the next two weeks.

Finally, what is Tim going to do about enforcing the use of correct nomenclature by programmers and documentation writers? Do you think it might be useful to provide "official" variable-names, so that we can read each others code more easily? Is this something that we should raise at the MMM today?

Cheers,
Jan

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Jan E. Noordam	
NFRA	Internet: "noordam@nfra.nl"
P.O.Box 2	Phone: (31)-5219-7244
7990 AA DWINGELOO	FAX: (31)-5219-7332
The Netherlands	

From abridle Mon Apr 24 09:34:08 1995

X-VM-v5-Data: ([nil nil nil nil nil nil nil nil nil]

["1839" "Mon" "24" "April" "1995" "09:33:58" "-0400" "Alan Bridle" "abridle" nil "35" "Re: Glossary" "^From:" nil nil "4" nil nil nil nil] nil)

Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA27235; Mon, 24 Apr 1995 09:33:58 -0400

Message-Id: <9504241333.AA27235@polaris.cv.nrao.edu>

In-Reply-To: <9504240943.AA13930@duw01.nfra.nl>

References: <9504072120.AA95451@polaris.cv.nrao.edu>

<9504131550.AA28878@duw01.nfra.nl>

<9504131757.AA39294@polaris.cv.nrao.edu>

<9504141249.AA29458@duw01.nfra.nl>

<9504172106.AA39297@polaris.cv.nrao.edu>

<9504240943.AA13930@duw01.nfra.nl>

From: abridle (Alan Bridle)

To: JNoordam@nfra.nl (Jan Noordam)

Subject: Re: Glossary

Date: Mon, 24 Apr 1995 09:33:58 -0400

Hi Jan,

I will work on the gain definition a little more today as your comments are similar to the direction I was going in following a good conversation with Mark Wieringa. I think we are in good agreement I just need to tidy the text a little. The role of the atmospheric path in the antenna/i/f/ gain is mentioned of course but this can be made a bit more explicit. I agree that i.f. gain is likely to be used as a shorthand and within the code itself I see nothing wrong with that. It is not of course what the electronic engineer would mean by the term, any more than "antenna gain was", but in all the years of doing this it has not been possible to come up with an unique terminology that people will recognize and use. I think the proper role for the glossary is to identify what the terms really are and to mention the colloquial variants also, then leave it for the user to determine the proper context. We can encourage good usage, but there is no way to enforce it!

Indeed your point should come up at the MMM today. I am reluctant myself to tell programmers what they must do, but I am ready to point out that there will be advantages to programmers using the terms only as they are defined in the glossary. I feel that it is up to the project management to decide how rigorously to enforce this!

On "baseline" my first point was to make it clear that there are two very different terms in use already. I am adding a lot of detail about interferometric baseline co-ordinates and geometries at the moment and we should probably take a look at whether the interferometric baseline terms are tightly enough defined when that is complete. There is bound to be some confusion with the spectroscopists' use of baseline in a purely semantic sense but the context usually does make the sense fairly obvious.

A.

From abridle Tue Apr 25 09:34:22 1995
X-VM-v5-Data: ([nil nil nil nil nil nil nil nil nil
["1504" "Tue" "25" "April" "1995" "09:34:20" "-0400" "Alan Bridle" "abridle" nil "29" "Glossary/MMM" "^From:"
nil nil "4" nil nil nil nil]
nil)
Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA24989; Tue, 25 Apr 1995 09:34:20 -0400
Message-Id: <9504251334.AA24989@polaris.cv.nrao.edu>
From: abridle (Alan Bridle)
To: aips2-doc
Subject: Glossary/MMM
Date: Tue, 25 Apr 1995 09:34:20 -0400

A couple of follow-up points from the MMM discussion re documentation of April 24:

1. Although the Glossary is now over 400 items, I don't think it's "finished" by any means. I am still adding many basic terms and formulae. I expect this will be an ongoing job for some months to come. Especially in the single-dish arena, which is under-represented at the moment given that the previous Glossaries I started from dealt with interferometry and computing.

2. Richard Simon asked if I was including VLBA-specific terminology. I should clarify that I am still trying to gather more generic terminology that has been around for a while. I am not at this point including terms that are used only at the VLA, or VLBA or WSRT (for example) and have in fact passed over a few VLA-isms or NRAO-isms that were in the classic AIPS Glossary. But when we have a need for particular instrument-specific language in the general Glossary, I have no problem with adding it, identified as local dialect. Within interferometry, the present list is aimed at a very general, novice audience rather than at any one instrument or specialty. The only dialect given special treatment so far is AIPS++. It will however help me if some VLBI-ers (not just VLBA-ers) would take a look through the present draft and suggest generic terms that should be added. There is very little in there at the moment that is specially pertinent to astrometry, geodesy, time-keeping or tape-recorder technology, for example.

A.

From root Tue Apr 25 09:34:39 1995
X-VM-v5-Data: ([nil nil nil nil nil nil nil nil nil
["1504" "Tue" "25" "April" "1995" "09:34:20" "-0400" "Alan Bridle" "abridle@polaris.cv.nrao.edu" nil "29"
"Glossary/MMM" "^From:" nil nil "4" nil nil nil nil]
nil)
Received: from cv3.cv.nrao.edu by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA38563; Tue, 25 Apr 1995 09:34:38 -0400
Received: from baboon.cv.nrao.edu by cv3.cv.nrao.edu (4.1/DDN-DLB/1.13)
id AA18732; Tue, 25 Apr 95 09:34:23 EDT
Received: from polaris.cv.nrao.edu by baboon.cv.nrao.edu (4.1/DDN-CV/1.8)
id AA22894; Tue, 25 Apr 95 09:34:21 EDT
Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA24989; Tue, 25 Apr 1995 09:34:20 -0400
Message-Id: <9504251334.AA24989@polaris.cv.nrao.edu>
From: abridle@polaris.cv.nrao.edu (Alan Bridle)
To: aips2-doc@polaris.cv.nrao.edu
Subject: Glossary/MMM
Date: Tue, 25 Apr 1995 09:34:20 -0400

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A.

From root Wed Apr 26 16:58:45 1995
X-VM-v5-Data: ([nil nil nil nil t nil nil nil nil]
["3046" "Wed" "26" "April" "1995" "16:58:44" "-0400" "Brian Glendenning" "bglenden@nrao.edu"
"<9504262058.AA02743@colobus.cv.nrao.edu>" "81" "glossary comments [a-m]" "^From:" nil nil "4" nil nil nil nil]
nil)
Received: from colobus.cv.nrao.edu by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA16171; Wed, 26 Apr 1995 16:58:44 -0400
Received: by colobus.cv.nrao.edu (5.x/S2.3/NRAO-CV/2.3)
id AA02743; Wed, 26 Apr 1995 16:58:44 -0400
Message-Id: <9504262058.AA02743@colobus.cv.nrao.edu>
From: bglenden@NRAO.EDU (Brian Glendenning)
To: abridle@colobus.cv.nrao.edu
Subject: glossary comments [a-m]
Date: Wed, 26 Apr 1995 16:58:44 -0400

I hope the following are of some use. When I was using the "Go [back]"
netscape button I noticed that it just says "AIPS++ Glossary" - maybe you
should embed the glossary letter in the "title"(?).

abstract base class

In object-oriented programming, a class which has no implementation, only
an interface. Thus it can only be used polymorphically, and there must be
derived classes which inherit from the abstract base class.

AIPS++: Shouldn't we define ourselves?

aliasing

...

3. In computer programming languages, a region of memory which can be
accessed through more than one programming language entities (for
examples, pointers in C and C++). Aliasing makes it harder for compilers
to make optimizations, since it may not understand all the ways in which
a memory location might be modified. Aliasing is thus often an enemy of
performance.

antenna: Should multi-feed array have an entry? (Maybe the emphasis is your signature of things you want to make entries
for).

Association: In C++, an association is often implemented as a pointer.

bandpass calibration: ... After bandpass calibration the frequency response of
the system is flat. [Or something like that].

browser: Not just for text, e.g. the table browser.

Catalog: ... system will keep track ...

class: ... analogous to a type ... [not a derived type]. ... by set of methods
(member functions) associated with the class. The collection of methods in a
class defines its interface. ... to create or destroy individual objects
(instances).

clipping: As defined, only valid for a>clip; a<clip is also useful of course.

compression: You should maybe mention lossy vs. lossless compression. You
might want to mention AIPS style UV-compression, and ask Don Wells for a
pointer to compression that has been shown to be useful for astronomical

images.

DAT: link to exabyte (and vice versa?)

database: ... In AIPS++, the Table system is used to implement the database.

datacube: The last paragraph is not true in general! In particular, tiled decompositions are not unusual (e.g. in Gooch's Karma, KIPS, eventually AIPS++?).

Doppler: Mention the differences between optical and radio definitions?

dork: !!

Exception: In C++, an exception is a language-supported mechanism in which objects (which usually convey information about the error) are thrown from one part of the program, and may be caught elsewhere in the program.

Faraday rotation: Say something about its usual wavelength dependence?
Atmospheric vs astronomical?

Host computer: !!

instantiation: 3. In C++, the process of creating a new class from a parameterized type.

Karma: It looks like we won't be using this for graphics.

kernel: Mention convolution kernel?

mask: Can be used to implement blanking.

method: Is a synonym for member function.

protocol: ... In object oriented programming, protocol is often used as a synonym for interface.

time: It might be useful to have a time entry with pointers to the various time system (etc) entries.

From abridle Wed Apr 26 17:59:34 1995
X-VM-v5-Data: ([nil nil nil nil nil nil nil nil nil
["562" "Wed" "26" "April" "1995" "17:59:33" "-0400" "Alan Bridle" "abridle" nil "15" "Re: glossary comments [a-
m]" "^From:" nil nil "4" nil nil nil nil
nil)
Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA49638; Wed, 26 Apr 1995 17:59:33 -0400
Message-Id: <9504262159.AA49638@polaris.cv.nrao.edu>
In-Reply-To: <9504262058.AA02743@colobus.cv.nrao.edu>
References: <9504262058.AA02743@colobus.cv.nrao.edu>
From: abridle (Alan Bridle)
To: bglenden@NRAO.EDU (Brian Glendenning)
Subject: Re: glossary comments [a-m]
Date: Wed, 26 Apr 1995 17:59:33 -0400

I guess I have only a couple of quibbles with your suggestions,
both tiny. I was figuring that by the time anyone reaches the AIPS++
glossary they know what AIPS++ is, so deliberately did not define it.
I also thought the "title" should remain the same, to indicate the
generic "document"="AIPS++ Glossary" that is being paged through.

Is "table browser" a pure AIPS++-ism by the way? I notice
"browsing" becoming used much more generally now and maybe it is
in need of multiple definitions anyway

Thanks again for the comments, all very helpful,

A.

From root Fri Apr 28 22:44:23 1995
X-VM-v5-Data: ([nil nil nil nil t nil nil nil nil]
["520" "Fri" "28" "April" "1995" "22:44:22" "+0500" "Mark Wieringa" "mwiering@nrao.edu"
"<9504290244.AA29276@kochab.cv.nrao.edu>" "16" "Re: Glossary" "^From:" nil nil "4" nil nil nil nil]
nil)
Received: from kochab.cv.nrao.edu by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA23663; Fri, 28 Apr 1995 22:44:23 -0400
Received: by kochab.cv.nrao.edu (5.0/S2.3/NRAO-CV/2.3)
id AA29276; Fri, 28 Apr 1995 22:44:22 +0500
Message-Id: <9504290244.AA29276@kochab.cv.nrao.edu>
X-Sun-Charset: US-ASCII
Content-Length: 520
From: mwiering@NRAO.EDU (Mark Wieringa)
To: abridle@polaris.cv.nrao.edu
Subject: Re: Glossary
Date: Fri, 28 Apr 1995 22:44:22 +0500

One minor item I noticed (in Hybrid Mapping, but it may occur elsewhere)
ATNF is given as an example of a connected element interferometer.
However ATNF is the NRAO equivalent. The correct abbreviation is ATCA.
This suggests:

entry: ATCA

Australia Telescope Compact Array.
A 6-antenna East-West connected-element interferometer with a maximum
baseline of 6km. It is located at the Paul Wild Observatory near Narrabri, NSW.
See http://www.atnf.csiro.au/ATNF/ATFNNarrabri/Site_info.html for more info.

Cheers,

Mark

From abridle Sat Apr 29 17:06:55 1995

X-VM-v5-Data: ([nil nil nil nil nil nil nil nil nil]

["68" "Sat" "29" "April" "1995" "17:06:54" "-0400" "Alan Bridle" "abridle" nil "4" "Re: Glossary" "^From:" nil nil "4"
nil nil nil nil]
nil)

Received: by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA36240; Sat, 29 Apr 1995 17:06:54 -0400

Message-Id: <9504292106.AA36240@polaris.cv.nrao.edu>

In-Reply-To: <9504290244.AA29276@kochab.cv.nrao.edu>

References: <9504290244.AA29276@kochab.cv.nrao.edu>

From: abridle (Alan Bridle)

To: mwiering@NRAO.EDU (Mark Wieringa)

Subject: Re: Glossary

Date: Sat, 29 Apr 1995 17:06:54 -0400

Thanks, Mark, I'll sort that out in the next round on the
A's.

A.\

From root Mon May 1 14:36:39 1995
X-VM-v5-Data: ([nil nil nil nil nil nil nil nil nil
["705" "Mon" "1" "May" "1995" "14:36:23" "-0400" "Richard Simon" "rsimon@cv3.cv.nrao.edu" nil "21" "Re:
Glossary" "^From:" nil nil "5" nil nil nil nil
nil)
Received: from cv3.cv.nrao.edu by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03)
id AA34219; Mon, 1 May 1995 14:36:39 -0400
Received: from baboon.cv.nrao.edu by cv3.cv.nrao.edu (4.1/DDN-DLB/1.13)
id AA29917; Mon, 1 May 95 14:36:26 EDT
Received: from antarctica.cv.nrao.edu by baboon.cv.nrao.edu (4.1/DDN-CV/1.8)
id AA20334; Mon, 1 May 95 14:36:24 EDT
Received: by antarctica.cv.nrao.edu (5.x/S2.3/NRAO-CV/2.3)
id AA03511; Mon, 1 May 1995 14:36:23 -0400
Message-Id: <9505011836.AA03511@antarctica.cv.nrao.edu>
X-Sun-Charset: US-ASCII
From: rsimon@cv3.CV.NRAO.EDU (Richard Simon)
To: aips2-doc@antarctica.CV.NRAO.EDU
Subject: Re: Glossary
Date: Mon, 1 May 1995 14:36:23 -0400

Just a quick comment regarding the glossary: the overall format is excellent, and easy to navigate. It easily satisfies at least one criteria for the usefulness of an on-line guide: it is much easier to use than a paper copy would be.

Given the ease of use, I believe a very broad scope for the glossary will be helpful to the wider community.

Richard

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520 Edgemont Rd. | +1 804-296-0278 (FAX)
Charlottesville, VA 22903 USA |