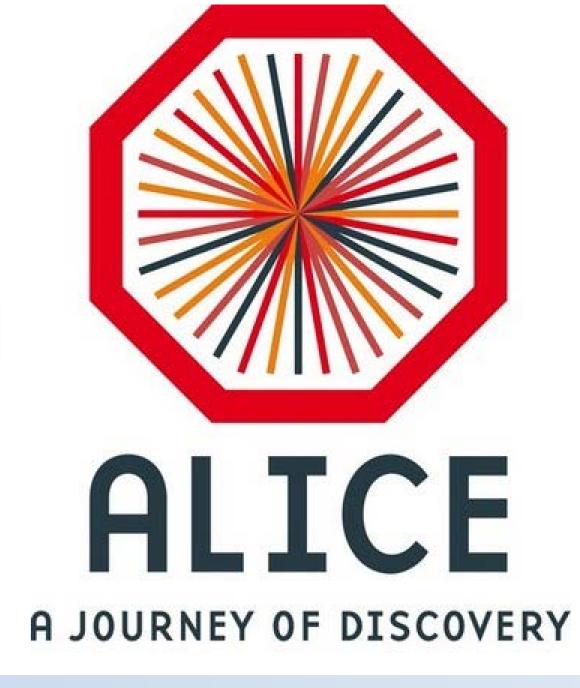
USING WEB SYNDICATION FOR FLEXIBLE REMOTE MONITORING

Ombretta Pinazza ^{(1) (2)}, André Augustinus⁽¹⁾, Peter M. Bond⁽¹⁾, Peter Chochula ⁽¹⁾, Alexander N. Kurepin ^{(1) (3)}, Mateusz Lechman ⁽¹⁾, Peter Rosinský ⁽¹⁾, on behalf of the ALICE Collaboration ICALEPCS 2013, San Francisco



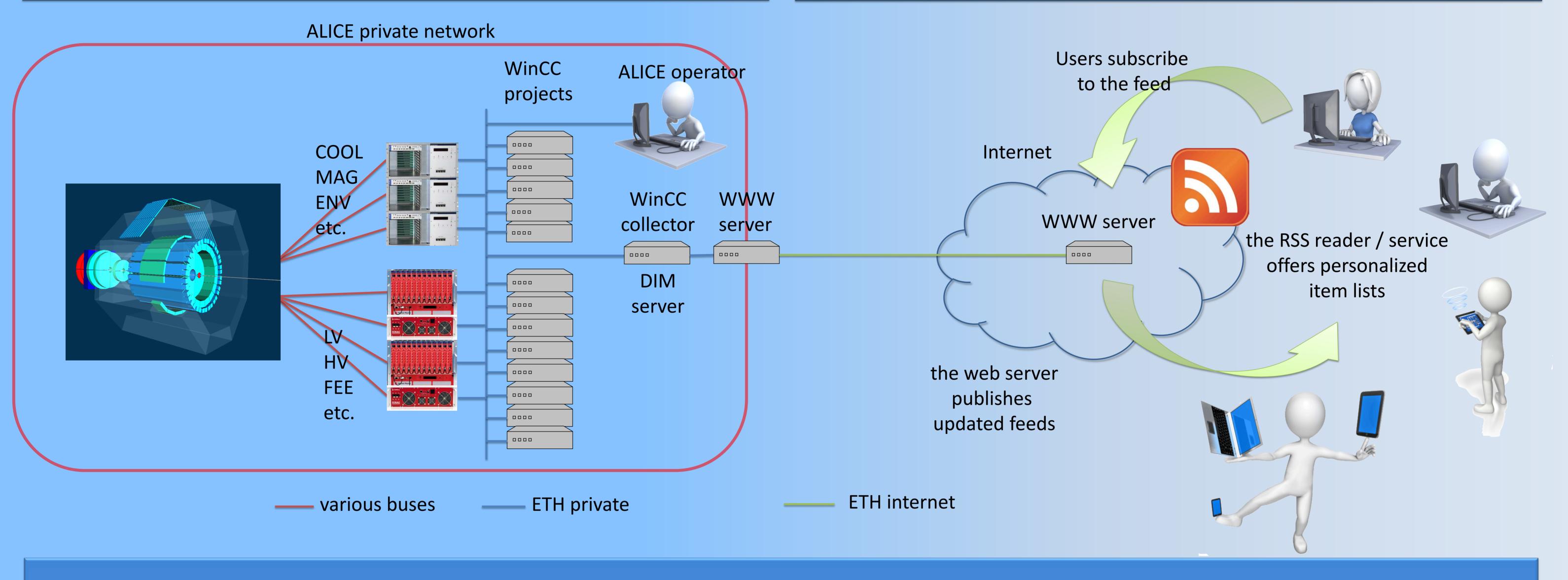
ALICE DCS is developing a flexible, web based software structure to provide its users a further way to stay updated on their experiment.

Exploiting standardized web syndication and RSS it is possible to distribute up-to-date web content from one web site to thousands of other web sites around the world.

Remote systems wishing to provide data and screenshots to the collector run a specific process (a WinCC CTRL manager) based on a custom library (AliceRSS) implemented in WinCC. The library reworks data to build the RSS array and send it to the collector using the DIM client-server software.

The collector is running a web and a DIM server and generates the

Subscribed readers can access the content in their most convenient manner, profiting from their preferred device, which could be a web browser running on a smartphone or a computer, a dedicated app for their iPhone or Android tablet, etc. XML item list, as well as the HTML file containing the extended description. Every time a new post is received, a new XML file containing all items is assembled and published on the official web site, reachable from the Internet.



The information to be published comes from several sources connected to different private networks: sensors installed in the experimental site, sub-detectors' online projects, alert systems and operation logbook. Data is represented as graphs or tables; screenshots are displayed as images, periodic reports are filled to summarize the operations performed and the status of the experiment. Information tagging allows readers to subscribe to the web content according to their needs.

Nowadays several free web aggregators and services are available on smartphones, tablets and computers. This publication technique is offered as a complement to more traditional ways of accessing the control system, like logging into gateways and accessing the SCADA systems directly. It's a lightweight and secure way to deliver customizable information and facilitates a personal experience to interested users.

Figure 1: resulting page	, read with a web	based plugin from	Chrome
--------------------------	-------------------	-------------------	--------

ALICE DCS facts ×					
🗲 🤿 C 🖌 🗋 cloud.feedly.com/#subscription%2Ffeed%2Fhttps%3A%2F%2Falicedcs.web.cern.ch%2FAliceDcs%2FRSS%2Fglobal_DCS_lit 😭 🔀 🐇					
≡	ALICE DCS Facts +add to my feedly Be the first reader (served in 230ms)				
	AUG				

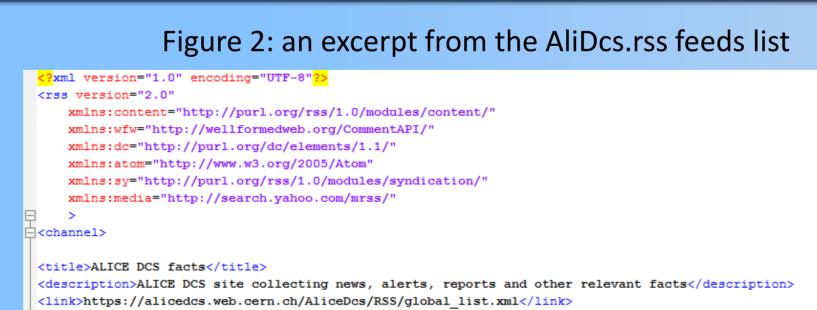
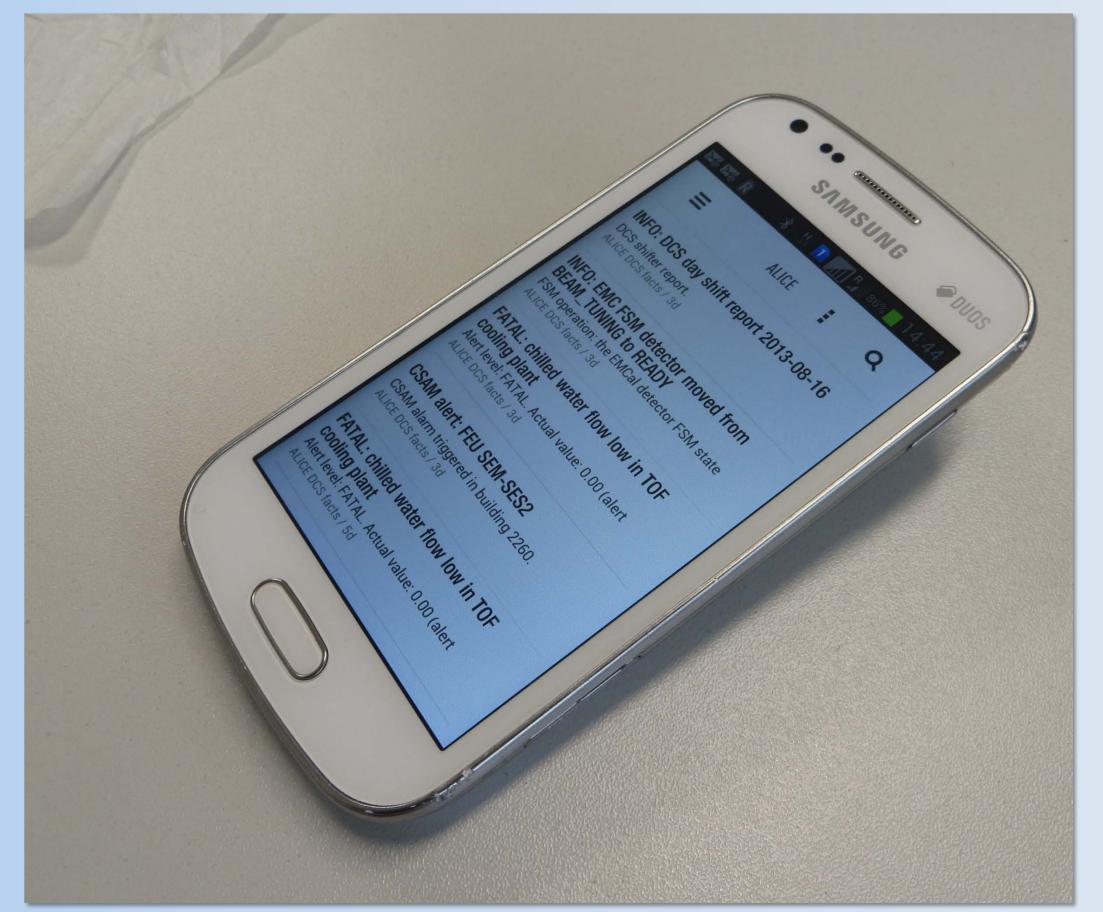


Figure 3: the RSS Feedly app, running on an Android smartphone



INFO: DCS day shift report 2013-08-16	INFO: EMC FSM detector moved from BEAM_TUNING to READY	FATAL: chilled water flow low in TOF cooling plant
DCS shifter report. ALICE DCS facts / 9d	FSM operation: the EMCal detector FSM state changed from BEAM_TUNING to ALICE DCS facts / 13d	Alert level: FATAL. Actual value: 0.00 (alert threshold 10.00) ALICE DCS facts / 16d
mark as read // save	mark as read // save	mark as read // save
2207 BAR 2212 2 BR 2207 BAR 2255 7 2 BR 2207 BAR 2255 7 2 BR 2208 P2 2208 P2 2208 P2 2208 P2 2208 P2 2208 P2 2208 P2 2208 P2 2209 P2 200 P2 P2 200 P2 P2 P2 P2 P2 P2 P2 P2 P2 P2 P2 P2 P2 P		SHUTDOWN: NO BEAM SHUTDOWN: NO BEAM Commettin (16-7eb-3213 06.253.13)
CSAM alert: FEU SEM-SES2	INFO: DCS night shift report 2013-07-01	LHC info: NO BEAM
CSAM alarm triggered in building 2260. ALICE DCS facts / 24d	DCS shifter report. ALICE DCS facts / 56d	*** END OF RUN 1 *** No beam for a while. Access required time estimate: ~2 years
		ALICE DCS facts / 191d

Ę	<item></item>
Ę	<title></th></tr><tr><th></th><th>LHC info: NO BEAM</th></tr><tr><th></th><th></title>
	<link/> https://alicedcs.web.cern.ch/AliceDcs/RSS/pages/info/LHC/no_beam_20130216082513.html
	<pre><pubdate>Sat, 16 Feb 2013 08:25:13 +0100</pubdate></pre>
	<category>:[CDATA[LHC]]></category>
	<category>:[CDATA[Info]]></category>
	<guid ispermalink="false">no_beam_20130216082513</guid>
Ę	<description></description>
Ę	[CDATA [</th
	*** END OF RUN 1 ***
	No beam for a while. Access required time estimate: ~2 years
	-11>
Ę	<content:encoded></content:encoded>
Ę	[CDATA [</th
	<div class="wp-caption alignright" id="attachment_50484" style="width: 310px"></div>
	
	<img <="" height="200" src="https://alicedcs.web.cern.ch/AliceDcs/RSS/pages/info/LHC/images/lhc1.png" th="" width="300"/>
	alt="Alarm location" width="300" height="277" class="size-medium wp-image-50484" />
	<pre></pre>
	*** END OF RUN 1 ***
	No beam for a while. Access required time estimate: ~2 years <div id="aspdf"></div>
	11>
	<pre>-</pre>
Ę	<pre>item></pre>
Ę	<title></th></tr><tr><th></th><th>CSAM alert: FEU SEM-SES2</th></tr><tr><th></th><th></title>
	<pre><link/>https://alicedcs.web.cern.ch/AliceDcs/RSS/pages/alerts/CSAM/Fire_alarm_201308012136.html</pre>
	<pre><pubdate>Thu, 01 Aug 2013 21:36:23 +0100</pubdate></pre>
	<category><![CDATA[CSAM]]></category>

⁽¹⁾ CERN – European Organization for Nuclear Research, Geneva, Switzerland, ⁽²⁾ INFN – Sezione di Bologna, Bologna, Italy, ⁽³⁾ INR RAS - Institute for Nuclear Research of the Russian Academy of Sciences, Moscow, Russia