

INCON

INCON: the newsletter of the Ireland Section of ISA.

OUTGOING PRESIDENT'S ADDRESS TO AGM JUNE 2005



ISA AGM 2005, Chain Handover from
Martin Almond to Kevin Dignam

Firstly, I would like to welcome you all here tonight to our ISA Ireland Section AGM 2005.

During my opening address on 10th June 2004 I thanked the out-going committee under Peadar Walsh's leadership for the healthy state they have handed over the ISA Ireland section and felt that they would be a very hard act to follow. However I also knew that with the incoming committee we were very well set up to meet and, hopefully, exceed that challenge. I am delighted to be standing here tonight reporting on a term where the committee has indeed served the members well. They have done themselves

proud and advanced the reputation and influence of the ISA Ireland Section both nationally and internationally. This hard work will be clearly highlighted in the reports delivered by each of the section "chairs" but I would like to take this opportunity to recognize and acknowledge the dedication, commitment and very high standard of work carried out by all the committee members.

We started off the year with the news that the ISA Ireland section under the leadership of Peadar had won a gold award for our activities in the 2003-2004 term. This continues our tremendous achievement of the two Gold Section Performance awards for the previous terms. Congratulations to Peadar and his committee. We have made our submission for the 2004-2005 term and hopefully we will again be successful.

My ambition for the year was to continue and strengthen the work carried out by the out-going committee and to this end set the following goals:

- Maintain the growth of membership within the Ireland section – and increase membership base, for example by growing our information boundaries to attract the automation and IT disciplines

- Develop and increase the services and benefits to our members by bringing new diversity in personnel to the committee membership
- Develop and improve our interaction with the student sections in both CIT & FAS by, perhaps, organising a team event or team competition as we saw in Houston in October last year.
- Charter a new student section in the Sligo CIT, building on our technical talk there last March

And the continuing goals:

- Build on the transfer of information to our membership, using our newsletter "Incon" & our web site.
- Increase our profile nationally and internationally.

I can report with confidence that all the above goals have been worked on throughout the year and Kevin Dignam as incoming president has committed to fulfill any goals that have not been completed 100%. Each of the "chairs" will give their own individual report but I would like to take the opportunity to recognise, congratulate and to thank you for all the hard work and effort that you have freely given in making this a successful and noteworthy year.

Our technical programme, under the chair of Trevor Edwards, was very professionally organised and executed. There were 10 technical talks on topics very relevant to today's industry. Three of the talks were hosted outside of Cork and build on the relationships

and contacts established over the past few years. These 'external' talks are crucial to extending the influence of the Ireland Section nationally. Unfortunately our plant tours did not materialise due to scheduling difficulties. On behalf of the members I thank Trevor Edwards and his committee for all their hard work.

The ISA conference was held in November in the Maryborough House Hotel. The conference "Practical Application of New Technologies in Today's Industry" was a tremendous success with many new or lapsed members signing up on the day. Mr. Paddy Caffrey, President of the IEI, chaired the conference. His support along with his extensive experience of the industry and the very relevant topic of the conference went along way in achieving the goals of our society to advance the technology and competence and careers of our members. The conference chair was Kevin Dignam and my thanks to him and his committee of Billy Walsh, Michael Meade, Declan Lordan and Peadar Walsh for all their hard work

The Honour & Awards Ceremony, held on the 6th December 2004 under the chair of Brian Curtis and his nomination sub committee, was another great success. We were honoured by the attendance of the Right Honourable Lord Mayor of Cork, Councillor Sean Martin, whose warm and engaging personality further enriched the event. It is great to recognise and encourage excellence and innovation in our budding engineers and technicians. The committee can justifiably take great pleasure in the delight and pride of the students in receiving the honours and awards.

The annual exhibition was held in the Rochestown Park Hotel on 26th April, 2005. This exhibition went extremely smoothly due to the excellent organisation and structures put in place by James O'Driscoll and his sub-committee. There was a good attendance and great support from the industry. It was also financially successful and this will support other activities of the Section. Well done to James and his team for a very successful day. It does indeed take a lot of hard work, planning and commitment to bring so many people and companies together in a very tight time schedule.

Brian Curtis continued his sterling work and published four issues of our section's newsletter Icon. A fifth addition was issued earlier this week by Barry Nugent with a sixth being published and posted shortly. Our thanks to Brian and Barry for this very important activity as it is one of our key tools in keeping members informed of the activities of the Section, including up-coming events. It is also key in recruiting new members. Its frequent publication truly reflects the continuous hard work of committee throughout the term and is greatly appreciated by the members.

Web sites are, by their nature, ever changing. In today's world where most peoples' introduction to any organisation is via the internet it is vital that all information is kept up to date. No one is interested in becoming part of an organisation with an out of date web site. Our thanks indeed to Eoin O'Riain for recognising the importance of the web site in today's working environment and for all the effort required to keeping the site current and maintaining the wealth of information

available, including our standards and practices reviews.

Standards and Practices was chaired by Declan Fleming. A number of standards were reviewed and as noted previously these are now available to view on the web site. Well done to Declan for all his hard work.

Declan Lordan again ably took on the Education chair. We held talks for the students in FAS and CIT and gained new student members in both the University of Limerick and in the Sligo IT. Well done Declan.

Willie Cody and Declan Lordan continued their good work with the membership recruitment and retention. It is great to report that the membership has increased this year to over 300. Our systems to monitor and record membership are working well and we are beginning to see their benefits. Well done Willie and Declan.

The Past Presidents' sub-committee has continued to be of great assistance to the committee in providing support and advice to us throughout the year. Our thanks to those concerned, namely Tony Mahon, John Lotty, John Farrell, Eamon Creech and Peadar Walsh. They have always been on hand when required and I look forward to working with you in the year ahead. Their ability to stand back and review where we are at and where we could go or should go is of enormous value in keeping the ISA Ireland Section focused on its mission to service to its members.

This report would not be complete without recognising the "unsung" heroes namely Michael Meade, our section Treasurer, for

maintaining the accounts in a strong and healthy manner, Billy Walsh, PRO for his continued assistance even with his onerous task of being the District 12 President, Secretary Brian Nolan who's organisational skills and support have been priceless, and the chair of the Past Presidents sub-committee Peadar Walsh. Peadar promised me continued support throughout by term of President. You have more than kept you promise Peadar for which I am very grateful. You were indeed an enormous support, encouragement and help to me throughout the year.

It was a great honour for the Ireland Section to host the District 12 DLC Meeting in Cork this year. The visit to Cork of so many of our fellow colleagues who traveled many miles from the other sections of District 12 further enhanced our influence and recognition outside of Ireland. On behalf of the members I thank Kevin Dignam as DLC coordinator and his sub-committee for all their hard work in organising the District 12 DLC meeting and we wish Billy Walsh continued success in his term as District 12 Vice President. His commitment to the ISA both in Ireland and internationally has been truly captured in our signing of the Agreement for Co-operation between the ISA Ireland Section, located in Cork, and the ISA Russian Section, located in St. Petersburg. This Agreement for Cooperation will facilitate greater communication between both sections and share expert knowledge amongst Irish and Russian members.

My thanks also to committee member namely, Bob Shine our historian, who has been an inspiration to me and the committee, and has ably assisted, when requested, at various events during the year.

To Billy Walsh as District 12 Vice President I would like extend my gratitude for never ending support, and guidance throughout the year.

I would also like to acknowledge the support the ISA Ireland section has continued to show towards District 12. Billy Walsh is now the DVP, Declan Lordan as Treasurer and Eoin O'Riain as web master. As mentioned previously we hosted the District 12 workshop and this helps maintain our profile at the highest level within our district. Very well done to all involved.

I would like to thank President Elect, Kevin Dignam, for his assistance over the last year. I have seen his proposed calendar for the coming year and it indeed carries us forward robustly. He knows that he has my full support and if he receives the same support from the committee as I did, then I am sure we will have another very successful year in the ISA Ireland Section.

I would like to take this opportunity to thank all the companies who assisted us throughout the year, for the hospitality and support, which is vital to the very existence of the ISA Ireland Section. I would also like to thank my employers, Project Management, for their support during my term as President. I would also like to acknowledge the excellent support we received continuously from our interface with ISA USA, Laura Crumpler.

Finally I would like to say a very special thanks to Joanna for her understanding and tireless supported to me during the year.

Martin Almond

President ISA Ireland Section, 2004-2005

ISA ANNUAL GENERAL MEETING 2005

The ISA Ireland Section Annual General Meeting was held in Rochestown Park Hotel Cork on Thursday June 16th with the following reports presented.

Secretary's Report

The past year has been a very eventful and successful one for our section. I am not going to go into great detail on the individual chairs as each one has themselves prepared a report, which they will present tonight. I would like to say that the committee has again worked very hard this year and maintained a very professional approach throughout all the activities held.

In summary I would like to say that the technical meetings held were of a very high calibre and in general were well attended. Our membership has increased this year and hopefully will continue to increase for the year to come. We published four issues of our newsletter INCON, which is vital to keep the membership informed of all events and activities held. The Conference again was a great success and helps to maintain our profile at a very high level.

The Honours and Awards ceremony was very well organised and well received by all attending. The Exhibition was a tremendous success with all stands sold and an increase in the attendance this year.

Again this year we reviewed a number of standards and practices, and these were made available through our up-to-date website. Our Education chair continued to attract more

students and we held specific events for some student groups.

Finally I would like to say that our accounts are in a healthy state, and with the support of the Past Presidents sub-committee I am sure that Kevin will have a great year ahead.

Brian Nolan
Secretary

Treasurer's Report

The following details the financial record of ISA Ireland section for the period indicated.

1. Expenditure and Income report for year ending 31st March 2005 as prepared by Mr. Ted Buckley of accountants Business Accounting Services.
2. Treasurer's Summary of Accounts for year ending 31st March 2005.

I would like to take this opportunity to thank all my fellow committee members for their patience and support throughout the year.

In particular I would like to thank the Section President Martin Almond for his help and guidance in my endeavour to carry out task of the Treasurer.

The following are the closing balances to May 22nd 2005.

No.1 A/c – Payments	€2,809.03
No.2 A/c – Receipts	€34,703.23
Deposit A/c	€0.00
Term Deposit A/c	€14,304.67
Ireland Rebate A/c	€3,821.94
Total	€55,638.87

Michael Meade
Treasurer

Membership Report

The membership in the Ireland Section was slowly falling in recent years and we started the year in June 2004 with 230 Members including both active and grace period members. We were using the monthly US Roster for emailing, mail shots etc.

In October Declan Lordan volunteered to help organise an membership recruitment and retention drive with special emphasis on targeting lapsed members. This was put in place in February and the closing date was 28th June. The draw was structured to reward all members' not just new members. All members in go standing on the 28th June were entered into a draw for 10 prizes. The first prize was an Apple iPod, the results of the draw will be published in the next Incon due out immediately following the AGM and a copy is shown on the back of this report.

We have also set up the membership database where we will hold all the membership details and compare it on a monthly basis to the listing that is sent from the US. The benefit of this is that we can keep track of lapsed members even after they are omitted from the RTP list, which happens 3 months after their membership expires.

The database will make it more efficient to follow up lapsing members, a list of these members is being circulated at each monthly committee meetings.

It will be much easier to issue reminders, invoices and receipts as well as accurate membership address. This will in the future help us to target new members, as we will keep a list of the attendees to our technical meetings.

Through the hard work of my sub-committee and your council we have been able to turn around the membership decline of recent times, we now have 285 Active Members and another 26 in the grace period giving us a total of 311 members which is an increase of over 80 members (35%) from this time last year.

I would like to thank Declan Lordan for developing the membership database and wish him well next year as membership chairman. I would like to thank Martin and all the committee for the hard work on membership that has helped to increase our numbers this year.

*Willie Cody,
Membership Chair*

Conference Report

The ISA Ireland Section Conference took place at the Maryborough House Hotel, Cork on Tuesday 9th November 2004.

The conference was chaired by Mr. Paddy Caffrey, President of the Institute of Engineers in Ireland.

The conference title was 'Practical Application of New Technologies in Today's Industry'.

The conference was attended by over 80 professionals from Industry throughout Ireland.

*Kevin Dignam,
Conference Chair*

Talented Building Blocks



Total lifecycle management is a matter of fundamentals.

Installing and managing automation devices is almost elementary when your business is built on Industrial^{IT} products from ABB. Any way you arrange them, these "information enabled" components play a role in building new enterprise value.

We start with the industry's broadest range of instruments, analyzers, controls, low voltage products, drives, motors, power electronics, robots, and more. Then we enable and certify every device to Industrial^{IT} open standards: Asset documentation, configuration and connectivity tools, and lifecycle support resources are bundled into one powerful software shell for "plug and produce" installation and operation.

Whether you deploy them individually or integrated across the plant, ABB automation technologies provide the foundation you need for asset efficiency, transparency, and lowest lifecycle cost. Our customers, with over US\$ 100 billion of installed solutions worldwide, provide the proof.

To start arranging your own compatible enterprise building blocks, visit www.abb.com/automation.

Technical Program Report

Please find attached my report for the technical talks for the past year. I would like to take this opportunity to thank Martin Almond and Brian Nolan for the great amount of help that they gave to me during the year. I would also like to thank all my fellow committee members for their input during the year. Thank you to all the companies who provided speakers for the talks as without these people it would not be possible.

Advances in Coriolis Meter Calibration Technology

Cork Tues 19th October
Speaker: Mr Dean M. Standiford
Attendance =27

Shop Floor & IT Closing the loop

Limerick Tues 23rd November
Speaker:
Attendance =15

Common Mistakes Made in Industrial Temperature Measurement.

Cork Tues 25th January
Speaker: Mr Dave Ayers
Attendance =20

Design Considerations for Analytical Installations

Athlone Tues 8th February
Speaker: Mr Stephen Firth
Attendance =10

Design Considerations for Analytical Installations.

Cork Wed 9th February
Speaker: Mr Stephen Firth
Attendance =18

UPS Water Standards & Toc Measurement.

Cork Tues 22nd February
Speaker: Mr Steffan Rabbe
Attendance =20

Information is the key.

Cork Tues 8th March
Speaker: Mr John A. Salsbury
Attendance =16

Object Oriented Programming to Reduce the Validation Effort.

Sligo 5th April
Speaker: Mr Greg Clark
Attendance =12

Object Oriented Programming to Reduce the Validation Effort.

Cork 6th April
Speaker: Mr Greg Clark
Attendance =10

"Fieldbus" Lessons Learned

Speaker: Mr Peter Praske
Attendance =31

Trevor Edwards
Technical Program Chair

Education Report

This year we have seen a growth in our student membership from Sligo, Limerick and UCC. We have also speaking with Carlow Institute of Technology where they have several students that are interested in joining the ISA. We carried out a membership support drive within FAS and CIT Student Sections in November / December 2004 and this helped to increase membership numbers in both of these sections.

We organised two technical talks one in FAS and the other in CIT and the attendance to both was very good. I would like to thank Bob Shine for his help with these technical talks. Photographs are on the back of this report. We have continued with our policy of inviting all the students in these sections to all our technical meetings.

I would like to thank Martin Almond and the council for their support over the year and wish the incoming education chairman Bob Shine every success for 2006.

Declan Lordan
Education Chair

Newsletter Report

The ISA Ireland Section newsletter INCON, is an important means of communicating with section members, keeping every one informed of section events and local news. Reporting on technical meetings, seminars, plant tours, as well as advising on current ISA developments within Europe, and worldwide.

For the year 2003-2004 there were five editions of INCON published,

- October 2004, 16 pages.
- November 2004 16 pages
- December 2004, 12 pages.
- January 2005, 16 pages.
- June 2005, 12 pages.

Sponsorship continues to enable the newsletter to be published with minimal cost to the Ireland section. Siemens and ABB remain our major sponsors. To reduce costs for the publication of INCON maybe we should consider looking at the possibility of sending out INCON by email?

Finally, I would like to thank all those who contributed through photographs and the collation of information in the past year, and I would ask all members to send any photographs, articles or other information that they feel may benefit ISA members to the editor, and we will publish these in INCON.

Brian Curtis/Barry Nugent
Newsletter Editor



**ISA-The Instrumentation,
Systems and
Automation Society**

Standards & Practices Report

The following new draft standards were reviewed.

- ISA-12.00.01 Electrical Apparatus for Use in Class I, Zones 0/1/2 Hazardous (Class Locations)
- ISA-95.00.03 Enterprise-Control System Integration
Part 3 Activity Models of Manuf. Ops. Mgt.
- ISA-5.01 Instrumentation Symbols
- ISA-97.00.01 Flanged Vortex Flowmeters
- ISA-97.00.02 Wafer Style Vortex Flowmeters
- ISA-12.10.05 Electrical Apparatus Zones 20/21/22
- ISA-95.00.05 Control System Integration
Part 5 Business to Manufacturing Transactions
- ISA-77.41.01 Fossil Fuel Power Plants
Boiler Combustion Controls
- ISA-12.23-01 Electrical Apparatus for Use in Class 1 Zone 1 Hazardous (Classified) Locations.
Type of Protection-Encapsulation "m"

Declan Fleming
Standards & Practices Chair

Honours & Award Report

The ISA Ireland Section 2004 Honours & Awards was held in the Common Room University Collage Cork on Monday December 06. The Lord Mayor of Cork Councilor Sean Martin presented the awards to the following recipients:

• **Craft Apprentice Award:**

Mr. Alan Coakley, Turners Cross, Cork.

• **Technician Award;**

Ms. Martina Donnellan, Mountbellew, Co. Galway

• **Ger Dulea Award:**

Mr. Colm Kearney, Skibbereen, Co. Cork.

• **Technologist Award:**

Mr. Daniel O'Shea, Kenmare, Co. Kerry.

• **Instrument Pioneer Award:**

Mr. Maurice Radford, Co. Wicklow.

A special word of thanks to our sponsors who continue to support the Ireland Section and without whom this annual event could not take place.

- Douglas Controls & Automation
- DPS Engineering & Construction
- Flomeaco Endress + Hauser
- Janssen Pharmaceuticals
- Kirby Group
- O'Sheas Electrical

- Pegler & Louden Ireland
- Pfizer Ireland Pharmaceutical
- Project Management
- PRM Resource Group
- Proscion Engineering
- RPS Environmental Eng
- Schering Plough (Briny) Co
- Valve Services

Finally, I would like to thank Mr. Bob Shine, Mr. Declan Fleming and Mr. Declan Lordan for their assistance in organizing the event, also Mr. Brendan Barry and Mr. John Loughnane for their assistance in reviewing the nominations.

Brian Curtis

Honours & Awards Chair



STAR OF
A LESSER
MAGNITUDE

© 1991, 1994 LEO CULLUM

Webmaster Report

The website continued as before. It is updated as required by the committee.

During this period a special page was initiated on the District 12 website (for which I also act as webmaster) for the District Leaders Conference in Cork last month. It is hoped to have pictures on this up on the website shortly.

All comments and ideas on the site are welcome and should be sent by email to eor@read-out.net

I would pay a deserved tribute to Martin Almond, as President of the section, who kept us in line in his inimitable way. I wish him well in his retirement!

It is an honour to act on the ISA committee and I thank also the members who have given me this recognition down the years.

Eoin Ó Riain

Webmaster





Arjan Korzilius receives a presentation from Kevin Dignam at the Cork Technical Talk

TECHNICAL TALK BY ICONICS UK

The ISA Ireland section kick-started its new season of technical meetings with two talks by Arjan Korzilius of ICONICS UK. The one hour long evening presentation took at Bewley's Hotel in Leopardstown, Dublin, on the 4th of October at 7pm and was repeated the next day, on the 5th of October in Cork's Rochestown Park Hotel at 8pm.

The presentation consisted of an overview of the Heathrow Terminal 5 project, followed by a look at the operations & control system and then focusing on ICONICS involvement in the project, which lies in the control software arena, with a simulation of the system showing what happens from arrival to

departure of an Aircraft at Heathrow's T5. This was the first time in recent years that a talk was held in Dublin in a joint venture with the ISA Leinster section.

The event saw about 45 participants spread over the two nights.



Paddy Langan wins a Porsche!



Arjan Korzilius with Kevin Dignam, Jim Long (Leinster Section) and Paddy Langan at the Dublin Technical Talk

MEMBERSHIP

Current membership of the Ireland section stands at 305.

In due recognition of our efforts in this regard the section will be given the Membership Award at the forthcoming President's Fall Meeting in Chicago October 2005.

In order that the ISA Ireland section records are accurate and up-to-date concerning our members throughout the country, it is important to let me know if you have:

1. Moved house
2. Moved to a new employer
3. A new telephone number
4. A new fax number
5. A new e-mail address

This will enable us to make sure that all correspondence from the Ireland section and the USA will reach you at the proper destination and in time.

Euro Rates for ISA Membership:

- | | |
|---|---------------------------------|
| 1. Regular Membership | €85.00 |
| 2. Senior Membership | €85.00 |
| 3. Student Membership | €10.00 |
| 4. Division Membership | €7.00 |
| 5. Two year regular / senior membership | €158.00
(save €12.00) |
| 6. Three year regular / senior membership | €225.00
(save €30.00) |

Mr. Declan Lordan
Membership Chairman
ISA Ireland Section

Tel: 021-4317001

Fax: 021-4313603

E-mail : dlordan@douglas-esl.ie

ISA IRELAND SECTION
P.O. BOX 203
TOGHER MAIL CENTRE, CORK.

<http://www.iol.ie/~isaire>

E-Mail: Info@isa.ie



"They don't have cable, they don't have color, they don't have a VCR, and yet they seem happy."

"ISA, the international society for measurement and control, advances the technology and the competence and the careers of practitioners for the benefit of industry and humanity."



Mark Roosli (ISA) thanks Barry O'Brien (Genzyme) after the excellent tour

PLANT VISIT TO GENZYME IRELAND WATERFORD 6TH SEPTEMBER 2005

Genzyme Ireland invited the Ireland Section to tour their Tablet facility and there were 10 members in attendance.

This facility focuses on the manufacture and packaging of Renegal, a product for controlling phosphorus levels in dialysis patients. This process involves converting bulk active into oral dosage tablets and packaging into bottles. The process involves formulation, liquid filling, lyophilisation (freeze drying), vial inspection and labeling / cartoning. These operations take place in state of the art cGMP manufacturing facilities with a high focus on ensuring the quality of the product for our patients are maintained.

We would like to thank Barry O'Brien of Genzyme Ireland for the courtesy extended to us during the visit which was very well organised.

UPCOMING DATES

22-24th October 2005

President's Fall Meeting
Chicago

24-27th October 2005

ISA EXPO 2005
Chicago

3rd November 2005

Tour of Jack Lynch tunnel Cork

18th November 2005

Micro-brewery visit and talk
Franciscan Well North Mall Cork

24th November 2005

Committee Meeting
Rochestown Park Hotel Cork



Kevin Dignam , President ISA Ireland Section, 2005 - 2006

2005 / 2006 COMMITTEE:

Mr. Kevin Dignam – President
DPS Engineering, 021-7305034

Mr. Brian Nolan – President
Elect/Secretary
O'Sheas Electrical, 021-4510700

Mr. Declan Fleming – Treasurer
Schering Plough, 021-4329538

Mr. Marc Roosli – Technical Program
Dataworks, 051-878555

Mr. Bob Shine – Education/Historian
(Retired), 021-4543722

Mr. Declan Lordan-Membership
Douglas Control & Automation,
021-4317001

Mr. Michael Meade – Newsletter
DPS Engineering. 021-7305030

Mr. Eoin O'Riain – Webmaster
Readout, 091-506872

Mr. James O'Driscoll – Exhibition
Everyman Controls 021-7332937

Mr. Billy Walsh – Marketing
UCC, 021-4902144

Mr. Brian Curtis – Honours & Awards
DPS Engineering, 021-4702939

Mr. Martin Almond – Past Section
President
Project Management, 021-4974429

Mr. Peadar Walsh – Committee
Jones Engineering, 021-4510722

Mr. Terry McCarthy – Committee
DPS Engineering, 021-4701840

Mr. William Cody – Committee
Kirby Group, 021-4894004

Mr. Barry Nugent – Committee
086-6080231

F E E D B A C K

Section Committee Members can be contacted at:

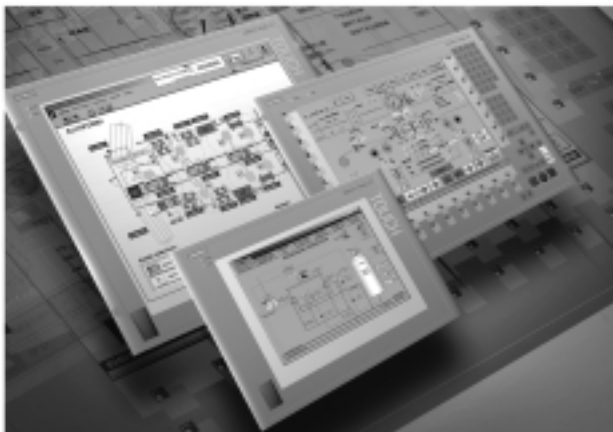
ISA Ireland Section P.O.Box 203, Toghher Mail Centre, Cork.

<http://www.iol.ie/~isaire> Info@isa.ie Membership@isa.ie

The views expressed in INCON are not necessarily those of ISA or ISA Ireland

Siemens Panel PCs for harsh industrial use

Siemens Automation and Drives (A&D) has developed two new Panel PCs for harsh industrial use: the especially compact Simatic Panel PC 677, and the flexibly expandable Simatic Panel PC 877. There are several front



designs available for both device types, offering 12" and 15" touch or key operation as well as a 19" touch version. The PC 677 replaces the predecessor model PC 670, and the PC 877 replaces the PC 870.

The new Panel PCs are equipped with powerful processors and are suitable for demanding visualisation tasks and for processing large volumes of data. Intel Pentium M processor is available for PC 677 and Intel Pentium 4 processor for PC 877. The remaining setup is scalable with a main memory configuration up to 2GB, hard disk drives up to 80GB and optical drives, 110-230V AC or 24 V DC power supplies, and the Windows 2000 or XP Professional operating systems. For higher system availability and data security, there is an optional RAID1 mirror disk system, supported by the onboard RAID controller on the PC 677, and the integral vibration-suppressed double hard disk module.

douglas

Neptune House, Victoria Road, Cork.
Tel: 021-4317001 email: info@douglas-est.ie
www.douglas-est.ie

SIEMENS

Fitzwilliam Court, Leeson Close, Dublin 2
Tel: 01 - 2162000
www.siemens.ie