

VOICE OF CUSTOMER (VOC)

Secondary Research Support Services



*Technical experts powered by sophisticated AI/ML
and Deep Web tools to extract unique insights*

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This document is confidential and intended solely for the information of the client to whom it is addressed

ABOUT SCITECH PATENT ART

- Established in 2002...one of India's leading technology intelligence firms for more than 17 years
- Maintaining confidentiality is core to our business
- Serve Fortune 500, universities and law firms
- 95+ advanced degree scientists and technologists



Our Difference

Human experts powered by data engineering & AI / ML tools

Client advantages: Cost, Turnaround Time & Quality

TEAM BACKGROUND: R&D, IP & COMMERCIALIZATION



Dr. Srin Achanta

Founder & Managing Director

- ◆ 25+ years in technology commercialization
- ◆ Technology & business strategy expertise
- ◆ Past affiliations: P&G, Booz & Co., Honeywell



Ms. Linda Perucca

Representative, USA

- ◆ 25+ years in R&D and Quality
- ◆ Knowledge Management & Training
- ◆ Past affiliations: Mondelez International



Mr. Hitoshi Yoshino

Representative, Japan

- ◆ 25+ years in technology transfer / licensing
- ◆ Large JP network – universities, companies, etc.
- ◆ Past affiliations: BTG, QED, JPO



Mrs. Uma Parameswaran

Executive Advisor

- ◆ 25+ years in R&D, Indian patent agent
- ◆ 12 years in technology analytics
- ◆ Past affiliation: R&D team lead at ACC, Mumbai



Mrs. Harita Achanta

Director

- ◆ 15+ years in engineering and IP analytics
- ◆ U.S. patent agent
- ◆ Past affiliations: Convergys, Sherwin Williams



Mr. Mark Kline

Consultant, USA

- ◆ 35+ years in research and open innovation
- ◆ Over 125 patents
- ◆ Patent strategy, patent prosecutions, patent litigations and training for inventors

VOC – OUR DIFFERENCE

- Extensive knowledge of databases and data sources
- Deep Web crawling, Big Data and machine learning analytics

**DATA ENGINEERING
&
AI/ML ANALYTICS**

**TECHNOLOGY
DEPTH**

- 95+ analysts in various technical disciplines
- Over 100,000 technical documents (patents, publications, websites,...) analyzed every month

**INNOVATION
SUPPORT**

- Over 17 years experience in supporting innovation teams
- Managers equipped to quickly turn a query into specific deliverables



OUR DATA SOURCES

PATENTS / TECHNICAL LITERATURE

- Derwent Innovation
- Questel Orbit
- PatBase
- PACER
- STN*
 - WPIX, CA, MARPAT, REGISTRY, IMS PATENT, ADISINSIGHT, EMBASE etc.
- Web of Science
- ScienceDirect
- Google Scholar, IEEE, PubMed, and other direct journal sources

BUSINESS NEWS / OTHERS

- Mintel
- Factiva
- Dun & Bradstreet
- Pitchbook*
- Crunchbase
- SPA's proprietary Deep Web crawling techniques (company websites, trade journals, product brochures, annual reports, industry news sites, etc.)

** Not included as part of standard costs. Extra costs may be incurred*

VOC – SERVICE EXAMPLES

Custom Services Tailored To Client Needs

CLIENT NEED

A

In-depth customer/supplier profiling to understand emerging needs and business direction in specific areas of relevance

B

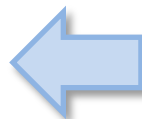
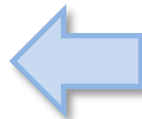
Problem – solution analysis to understand what problems are in focus and what solutions are under consideration and “Build a moat”

C

Customer and supplier alerts / summaries to highlight activity in areas of specific interest

D

Consolidated tracking of customer / supplier activity in a globally accessible, cloud-based portal



SPA SERVICES

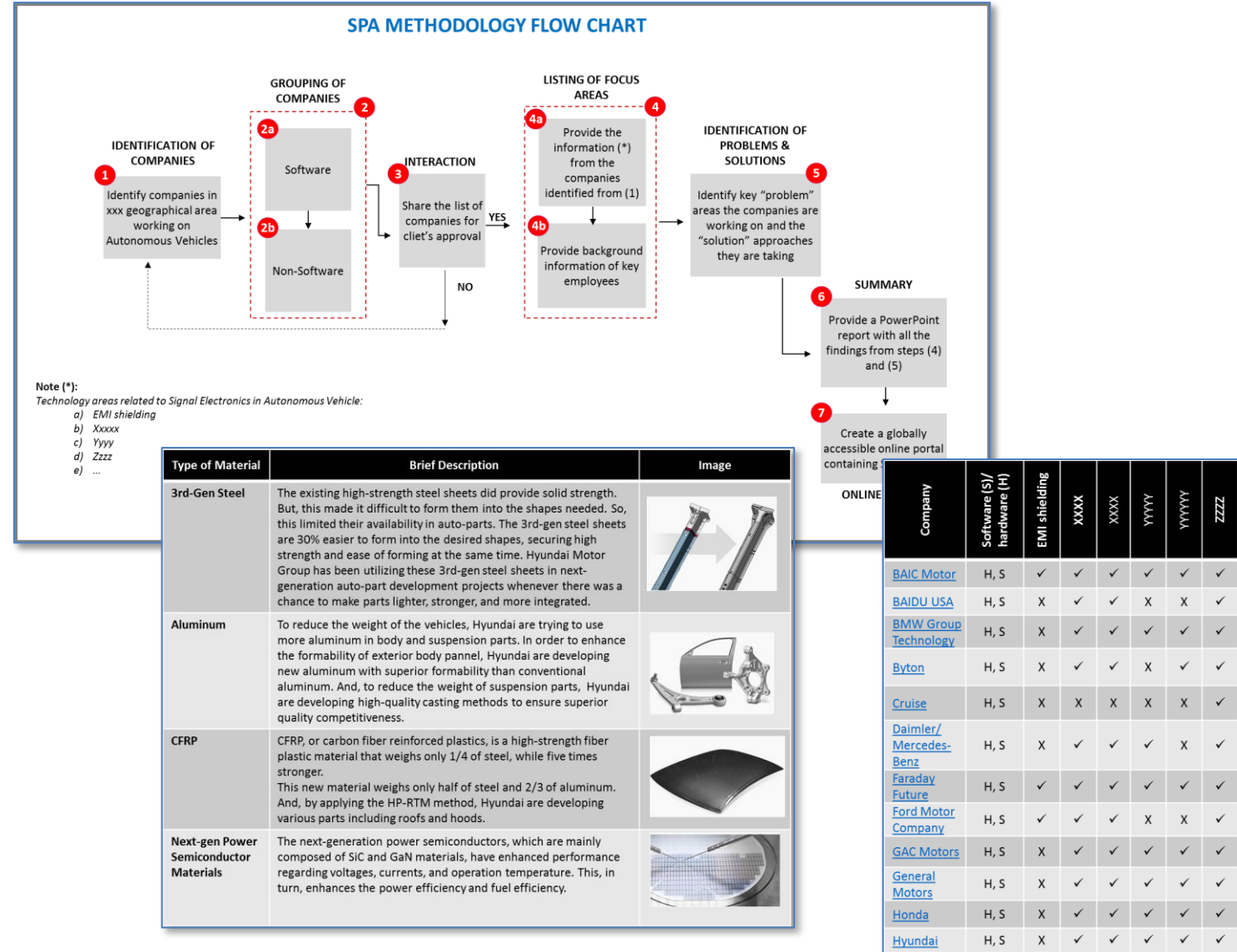
Deep-web crawl to extract insights from various sources (websites, trade journals, patents, etc.) with specific focus on technologies/applications of interest to the client

Analyze key problems disclosed in patents, technical literature, trade journals and summarize solution approaches. Use this approach to “Build a moat” around key IP

Customized news service with AI/ML filters to extract relevant information and one-page summaries to keep information flow succinct.

Search, extract and maintain an active portal with key customer/supplier developments, for innovation teams to collaborate, and provide management updates on a regular basis

- ✓ Client is a large, global leader in material science and technology
- ✓ Client innovation team was interested in in-depth profiling of customers in the area of signal-electronics as applied to autonomous vehicles
- ✓ Client team wanted to understand
 - What companies exist in Silicon Valley area that are working in this space?
 - What problems are they working on, which are relevant to client's capabilities in materials?
 - Which staff at the customer site had the most relevant expertise?
 - Global tracker to track the latest developments at these customers on a regular basis



- ✓ Client need: To understand what problems customers / industry is focused on and what are the solution approaches under consideration. Use this information to “Build a moat” around their core patents
- ✓ Data sources: Technical literature, patents, trade journal articles, web-sites

“BUILD A MOAT” SERVICE

Analytics

Understand
invention

Similar
technology

Subsequent
filings

Potential
features

New Ideas

Idea generation
Possible claims: Method of sealing
Possible claims: Multilayer seal
Possible claims: Multilayer seal
Possible claims: Self healing
Possible claims: Procedure for
Possible claims: Procedure for
Possible claims: Maximising
Possible claims: Seal assembly
Possible claims: High pressure
Possible claims: Seal assembly
Possible claims: Seal trapping
Possible claims: Seal assembly

Potential Ideas – Example Study

Idea # 1 Possible claims: Method of sealing

A method for sealing an annular channel with half dovetail configuration, the method comprising:
Mounting a seal with out compression within the said annular channel; wherein one of the wall of the seal butt against the said one of the portion of the channel; wherein the seal being symmetrical about an axis running through said walls of the seal; wherein the said seal design is of similar contour of the channel allowing maximum surface contact area for the retention of the said seal within the channel.....

EXAMPLE REFERENCE : US7810816B1

1. A method for sealing a space formed by first and second end surfaces adjacent inboard and outboard surfaces, the method comprising

- inserting a seal into the space without radial interference with inboard and outboard surfaces;
- engaging first and second end portions of the seal with the first and second end surfaces of the space;
- locally compressing the seal between the first and second end surfaces;
- straining the seal to rotate a cross-section of the seal to bias the seal into engagement with the inboard and outboard surfaces of the space

Key Figure (s)

METHOD

Method of sealing	Multilayer
	Self healing

Prior art Problem	Prior Approaches	Grinding Aid(s) Used to solve the problem	Benefit action(s)
Managing Organic Waste from factory	JP20032706A : Used factory drainage along with water as grinding aid in cement clinker grinding	7/30/2004 JP2005089287A Polyhydric alcohol and organic acids in the organic waste	Utilization of factory waste as grinding aid
Fly ash disposal	No Prior Approaches	7/30/2004 WO2000064832A1 Triethanol amine or ethylene glycol in the fly ash	
	EP989108: Polymeric esters of acrylic acid and methylpolyethylene glycol prepared by azeotropic esterification	5/2/2002 US6849703B2 Polymers of esters made from acrylic acid and alkylpolyalkylene glycols	Enhanced flowability Greater mechanical strength
	Use of stearic acid as an additive in grinding	12/22/2004 WO2005063399A1 Adipic acid	Enhanced flowability Less energy required
	ne (TEA), carbonic grinding stock	7/26/1999 EP976695B1 Tin (II) sulfate alone or in combination with calcium sulfate	Enhanced flowability
	salt of naphthalene condensate	1/26/2000 WO2000044487A1 Sugar derivative and non sugar derivative linked by amide, amine, imide, urea, or mixture groups	Enhanced flowability Less energy required
	a phosphoric acid additive.	1/20/1997 EP0785174 Polyaminophosphonate	Enhanced flowability Improved grinding Low additive to dry cement weight ratios
	aches	9/30/1998 JP2000103657A Lime stone impalpable powder, Diethylene glycol, Triethanolamine	Enhanced flowability Mechanical strength
	aches	8/21/1997 JP11060298A Tri-(isopropanol)amine	Enhanced flowability Increasing its initial strength,

- ✓ Client need: Custom tagged news alert on specific technologies and companies from web & Twitter data
- ✓ Data sources: Deep web crawl + Twitter data
- ✓ Analytics: ML-based tagging, analyst curation

OUR WORK PROCESS

Client need defined:
Types of users,
information of interest,
tagging requirements,
how often, format

Factors defined by SPA
Analysts:
• Sources for information
• Keywords for searching
• Criteria for auto-filtering

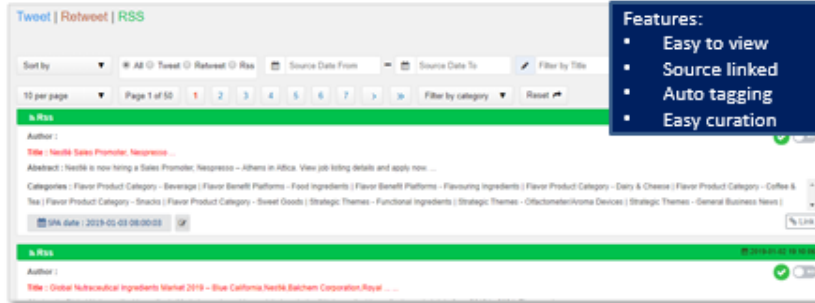
AGGREGATE (~2,000 – 3,000 sources)

WEBSITES

- Company websites
- Industry news
- Technology news

ALERTS

- Search engine alerts
- Alerts from other known sources

CENTRAL
DATABASE
(RAW DATA)
FED TO
ANALYST
INTERFACESPA'S FEED
CURATION
(MANUAL
OR
AUTO-
TAGGED
OR
HYBRID)Real-time
RSS FEEDS
(XML)FEED AGGREGATOR USER INTERFACE¹

RELEVANT NEWS FEED IN XML

```
<?xml version="1.0" encoding="UTF-8" ?>
<rss version="2.0" >
  <channel>
    <title>Nutrition Insights</title>
    <link>https://www.nutritioninsight.com/</link>
    <description>Nutrition Insights</description>
    <pubDate>2019-03-03 08:00:00</pubDate>
    <lastBuildDate>2019-03-03 08:00:00</lastBuildDate>
    <generator>Feed Aggregator</generator>
    <item>
      <title>Nutrition Insights</title>
      <link>https://www.nutritioninsight.com/</link>
      <description>Nutrition Insights</description>
      <pubDate>2019-03-03 08:00:00</pubDate>
      <lastBuildDate>2019-03-03 08:00:00</lastBuildDate>
      <generator>Feed Aggregator</generator>
    </item>
  </channel>
</rss>
```

DATA ENGINEERING
To extract structured
data at regular time
intervals

- 1) Interface available for client use if needed
- 2) Format is customizable based on client need

Partial List of Sources (SPA identified)

- <http://www.foodnavigator.com>
- <http://feeds.feedburner.com>
- <https://www.foodbusinessnews.net>
- <http://www.foodbev.com>
- <http://www.fooddive.com>
- <http://www.foodprocessing.com>
- <http://www.bakeryandsnacks.com>
- <http://www.bevindustry.com>
- <http://www.candyindustrynews.com>
- <http://www.confectionerynews.com>
- <http://www.efsa.europa.eu>
- <http://www.food-business-review.com>
- <http://www.just-food.com>
- <http://www.milkbusiness.com>
- <http://www.nutritioninsight.com>
- ...and many more

ONE PAGE SUMMARIES

Publication number: XXX
Title: YYYY

SYSTEM

AD
Autonomous or semi-autonomous vehicle,
where the vehicle control system employs
differential braking

FAILURE

STEERING MALEFUNCTION
Failure of vehicle steering control
EVENT: An audible warning will be sent to the
driver of host vehicle

SOLUTION

DIFFERENTIAL BRAKING
If the vehicle steering fails during automatic
vehicle steering, the host vehicle is made to
steer along the optimal path by using
differential braking

ACTION PLAN

EXTRAPOLATION
Enhanced collision avoidance for a vehicle

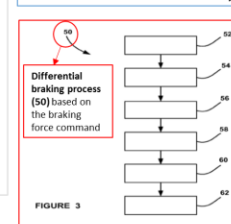
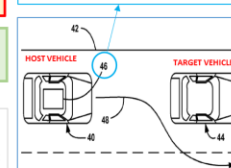
Differential braking : braking force command that selectively provides braking to wheels
ECA: Enhanced collision avoidance

A method to avoid collision between vehicles
(host and target vehicles) using differential
braking is claimed in this invention

TASK:
Automated vehicle steering causes the vehicle to
follow optimal path

Claims:
1. A method for providing collision avoidance in a
host vehicle, said method comprising: determining
that a collision between an object and the host
vehicle is imminent; determining an optimal path for
the host vehicle to travel along to avoid the object if
the collision is imminent; providing automatic vehicle
steering to cause the host vehicle to follow the
optimal path; determining that the vehicle steering
has failed during the automatic vehicle steering;
and causing the host vehicle to steer along the optimal
path by using differential braking if the vehicle
steering has failed.

Enhanced collision avoidance (ECA) system
provides audible warning to the driver of the host
vehicle to avoid collision with target vehicle



Application number: YYYY
Registration number: Abandoned
Corresponding family: CN, DE are alive

If no action is taken, ECA system will
automatically initiate vehicle braking as long as
a distance from the host vehicle to the
target vehicle is > calculated braking distance

If speed of the host vehicle is above a
predetermined speed, the distance between
host and target vehicles are too short ->
initiates automatic steering if it distance
approaches the calculated steering threshold
distance

If distance between the host vehicle and the
target vehicle is so short -> initiates combined
automatic braking and steering

52 - If braking force command is > 0 or < 0
54 - Whether left side/ right side vehicle
braking based on above value

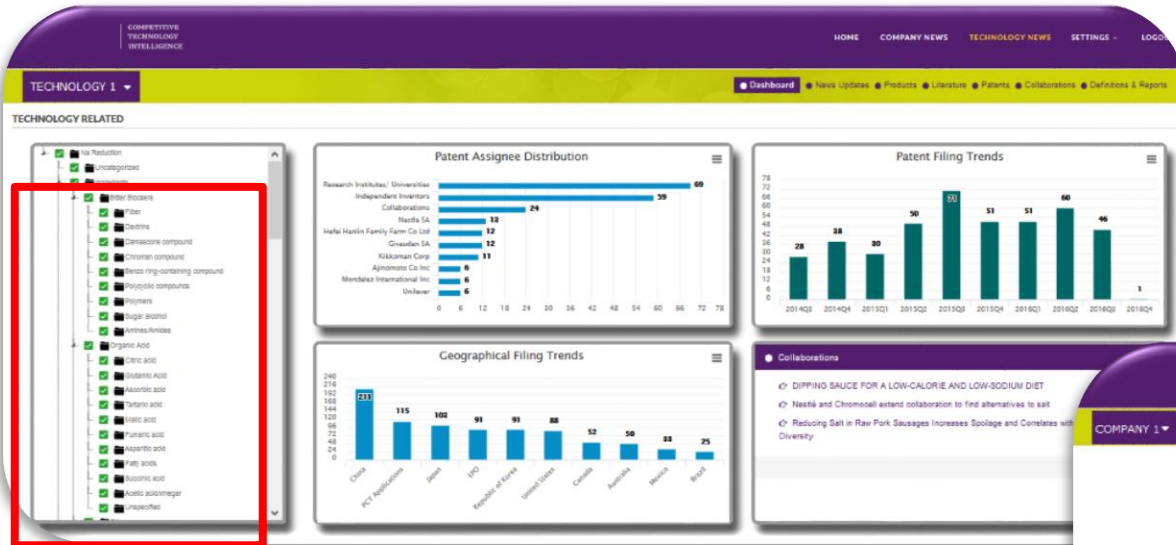
56 - whether front wheel or rear wheel
braking (based on the weight distribution of
the vehicle)

58 - Converts the brake force command to a
brake cylinder pressure command

60 - Checks whether brake cylinder pressure
> anti-lock braking (ABS) limit
62 - If above command fails, brake pressure
command is implemented

CASE STUDY D GLOBAL PORTAL FOR TRACKING CUSTOMERS & SUPPLIERS

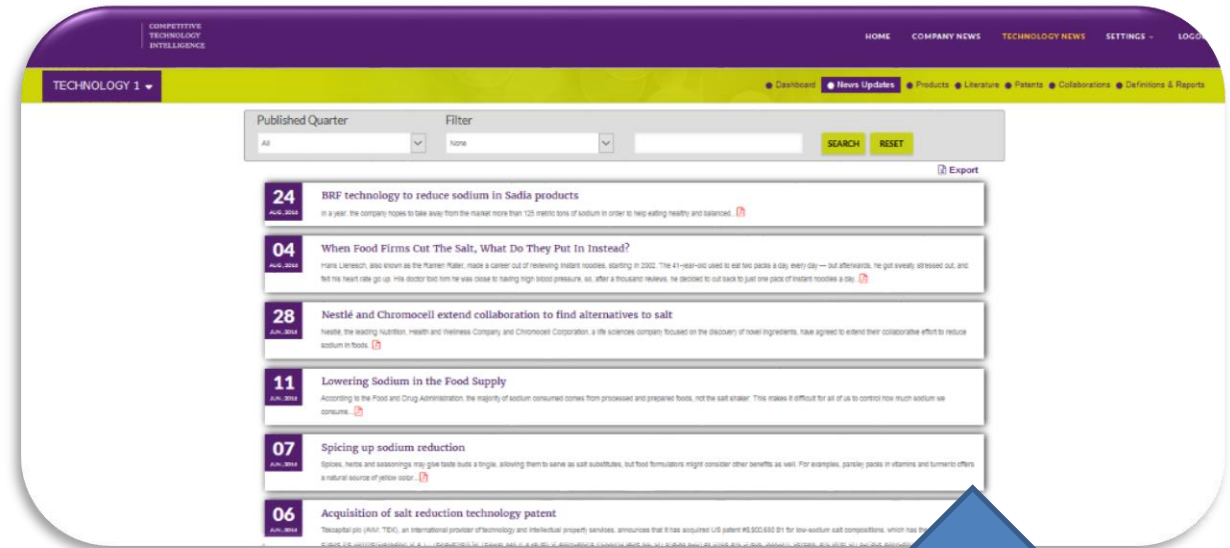
- ✓ Client need: Global cloud-based portal to track customers / suppliers, while allowing innovation teams to share and collaborate with the collected information



Multi-level categorization

Drill-down charts & graphs

New product launches with images, specifications, etc.



News updates in reverse chronological order with search filters